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ABSTRACT

A report on the 3-year regional project, sponsored by the Fund for the Improvement of Postsecondary Education (FIPSE), on the public investment in higher education and its importance to economic development for the six state legislatures of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont is presented. During the years of 1983-1986, the New England Board of Higher Education conducted in-depth policy briefings for the state legislatures and published the proceedings for all legislators in the region. The purpose of the project was to provide state legislators with economic and financial data, trends, and concepts concerning the strong relationship between New England's higher education system and its performance of economy. The project environment is discussed, noting the United States was emerging from a recession when the project began in 1983, but 3 years later, it was improved. Project results focus on: regional and national comparisons of funding for higher education institutions and state student aid; the state workforce's level of education and preparedness for the demands of a knowledge-intensive economy; the level of high-tech employment; and the presentation of a regional approach to broadening academic offerings. Legislators indicate this type of program is very helpful. Appendices include: publications of the legislative seminars held in each of the six states; the survey report entitled "Renewing Excellence"; two articles by the project director ("Forging New Legislative Alliances: Higher Education in the State Capitol" and "Higher Education and the State: New Linkages for Economic Development"); clippings illustrating the seminars' extensive media coverage; and letters recognizing the benefits of the program. (SM)

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THE NEW ENGLAND LEGISLATIVE PROJECT

Cover Sheet

New England Board of Higher Education
45 Temple Place
Boston, MA 02111

Grant No.:

G008 302 726

Project Dates:

Starting Date: September 1, 1983
Ending Date: August 31, 1986
Number of months: 36

Project Director:

Dr. Melvin H. Bernstein
New England Board of Higher Education
45 Temple Place
Boston, MA 02111
Telephone: 617/357-9620

Fund Program Officer:

Russell Garth

Grant Award:

Year 1	$59,569
Year 2	$63,997
Year 3	$65,443
Total	$189,009

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THE NEW ENGLAND LEGISLATIVE PROJECT

The New England Board of Higher Education on August 31, 1986 completed its three-year regional project on the public investment in higher education and its importance to economic development for the six state legislatures of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. During that time, it has conducted in-depth policy briefings for the state legislatures and has published the proceedings for all legislators in the region.

The Christian Science Monitor commented when the legislative project began in August, 1983: "If the educate-the-lawmakers plan works for higher education in New England, it should work elsewhere and on other levels."

It has worked successfully in New England according to 94 percent of participating legislators who, when surveyed, said the policy briefings were a helpful learning experience.

A Legislative Advisory Council comprised of legislative leaders from the region's six states and chaired by John Tucker, Speaker of the House of Representatives of New Hampshire, recommended that the New England Board of Higher Education continue the legislative policy briefings on a biennial basis for all six states. Carolyn Morwick, Executive Director of the Caucus of New England State Legislatures, says: "The joint planning effort, together with the briefings and publications, created an ongoing process resulting in higher education becoming more understandable and appreciated by legislators. This has created a more positive climate for higher education in the New England state legislatures."

Attached to this proposal are publications of the legislative seminars held in each of the six states and the survey report entitled, Renewing Excellence, on the attitudes of the region's legislators.

Also attached as part of the dissemination activities of the project are two articles authored by the project director. The first, "Forging New Legislative Alliances: Higher Education in the State Capitol," was published in the Educational Record (Summer, 1985). The second is a paper he wrote on "Higher Education and the State: New Linkages for Economic Development," dealing with the FIPSE project for the National Institute for Work and Learning which was disseminated to its national list of 500 public policy leaders.

Finally, in the Appendix are found clippings illustrating the extensive media coverage of the legislative seminars; and letters recognizing the benefits of the program.

Project Environment

When the New England Board of Higher Education's program of legislative policy briefings began in 1983, the United States was slowly emerging from the worst recession since World War II. The states were still reeling from runaway costs and revenues, pared down by sputtering economies and federal cutbacks. Twenty-three states cut spending for higher education in 1982, and by 1983, 39 had cut college and university expenditures.

Three years later, the picture has changed dramatically. The United States is beginning the fifth year of an economic recovery that is one of the longest in modern times. Interest in education as a vital national resource revived in 1983; in 1986 35 states have made it a top priority. Higher education has joined its scientific and technological assets in partnership with the resources of industry and state government, forging the greatest peacetime collaborative ever directed at economic development.

When NEBHE completed its three-year legislative project, new concepts had begun to emerge to enhance university partnerships. They now include such concerns as emphasizing the linkage of joint economic development projects to specific state resources and needs, and not promising too much too soon.

Taking the long view instead of attempting quick fixes was the position State Senator Robert J. McKenna of Rhode Island took in 1984 when he spoke at the Spring legislative seminar of "the need to have New England's public policymakers fully understand the long-term importance of the investment legislators make through yearly tax support of higher education." Recently, at the national level, Terry Sanford, president emeritus of Duke University and former governor of North Carolina, warned that "even when you have a great university, you can't build an image as a good industry location overnight." Sanford strongly stresses the importance of the long-term commitment of state leaders.

The premise of NEBHE's legislative project is that higher education is now--and will remain--the critical resource of New England's knowledge-intensive economy. During the balance of the 20th century the knowledge industries, with higher education at their center, are the driving force for state, regional and national economic growth. Sixty percent of all American workers now collect, organize or disseminate information, and that number continues to grow.

The purpose of the project was to provide state legislators with economic and financial data, trends, and concepts concerning the strong relationship between New England's higher education system and the performance of its economy. In an article written in 1981, later appearing in the Educational Record (Winter, 1982), John C. Hoy, President of NEBHE, said the challenges of the 1980s for the regional economy require that New England strengthen its system of higher education as it has never done before, and draw on the resources of colleges and universities to contribute to economic development. "Such a partnership would have much to teach educators and government officials in other areas of the United States," he wrote.

The need to focus on the information requirements of state legislators is twofold. First, there is the reduced federal financial support for the states, and the ever-increasing role states play in financing higher education. Most of the money that funds higher education comes from government, with states now providing nearly two-thirds of that total; it is the state legislatures which appropriate the public resources required for higher education. Between 1969-70 and 1984 the federal contribution to higher education fell from 24 percent to 9 percent, and is still dropping.

Secondly, there are 1,323 legislators in the New England states. At least one-third of legislative seats turn over every two years; most legislators serve only part time, receiving as little as $5 a day in Rhode Island and $100 per year in New Hampshire. The men and women who serve our region as lawmakers have a huge workload, scant staff support and little time to study in depth many of the issues before them, particularly on a subject as specialized as higher education has become.

Project Results

NEBHE's legislative briefings and publications have provided legislators with the policy analysis and comparative regional perspective lawmakers welcome in making informed decisions about financing higher education and developing human capital in their state. Briefings have now been held in all six state capitals. The basic message given at the briefings was this: "Here is where you rank, according to these indicators, among your sister states in New England. This is where you rank nationally. Compare the public investment in higher education per capita with your investment for other public services. Consider where you get the best return on public revenues invested. Is the present situation acceptable? If not, what are your goals, and why? Those are the policy questions to be addressed."

An overriding concern of the project is that what legislators want and need most is informed policy analysis/synthesis and bottom-line conclusions. This has been borne out by both national studies and the evaluations of project participants.

The 1984 attitude survey undertaken as part of the project, provided a baseline of information on what New England legislators know and want to know about higher education and economic development. The survey's key findings showed that the legislators want:

- Better information from higher education; for example, on tuition, contracts and grants;
- Better communication with higher education;
- State-level "High-Technology Morrill Acts" to strengthen science, engineering and technology;
- Regional coordination for job re-training;
- Annual data from colleges about their contributions to economic development, and student proficiency.

In the legislative briefings and related publications mailed directly to legislators, four issues stand out.

First: regional and national comparisons of funding for higher education institutions and state student aid. Vermont awards the most scholarship dollars per capita, Maine the fewest. In percentage improvement in state appropriations for higher education during the past two years, Massachusetts has jumped to fourth place nationally and Maine finishes fifth.

Second: the question of whether the state has a highly educated workforce, well-prepared for the demands of a knowledge-intensive economy. Of all of the New England states, Connecticut has the greatest proportion of college graduates in its workforce and is third nationally, behind Colorado and Alaska. Maine has the fewest, at a level below the national average.

Third: the level of high-tech employment in the state. Four of the New England states, led by Connecticut and Massachusetts, rank well above the national average. Both Rhode Island and Maine rank below it.

Fourth: the presentation of a regional approach to broadening academic offerings, and reducing tuition costs for citizens crossing state boundaries for their public higher education.

Evaluations of the legislative briefings by participating legislators reveal the following:

- Eight out of ten legislators think the briefings should be held on an annual basis.

- Ninety-six percent believes a comparative New England perspective is "helpful" or "very helpful."

Direct comments from the legislators show that they were impressed with the quality of the programs, appreciated the candor and objectivity of information presented, and considered the initiative a model to be repeated and expanded in the future. Typical comments were "very informative;" "I like getting everyone in the room at the same time and exchanging ideas;" "It's an improvement on the routine discussion and tired agenda of our standing committees;" and, "Let's have a follow-up session to review progress in meeting the needs identified."

Not least among the benefits of the legislative briefings was providing a unique forum for legislators to gain information, perspective and ideas not ordinarily available to them. The site of the last briefing of the series, held in February, was Augusta, Maine, when the legislature was undertaking a comprehensive review of the system-wide leadership and structure of the University of Maine. At this meeting, legislators said they would be more supportive of the system if they had a better idea of what goes on in higher-education circles.

"The only time I ever see anybody from the University is when they come before the Apporpriations Committee or when nominations for the Board of Trustees come to us for approval," said Representative James R. Handy, a member of the Joint Standing Committee on Education (D-Lewiston). Said Senate Minority Leader Thomas Perkins (R-Blue Hill), "If we gave an industry the appropriation we give the university and then saw as little of that industry as we do of them, it would be amazing." These views were shared by many legislators in attendance. A clear consensus emerged at the meeting: that the central office of the University of Maine should improve communication with the legislature and the public if the needs of Maine's economy are to be met.

In commenting on the value of the legislative project, Speaker of the New Hampshire House of Representatives John Tucker said, "We would be far behind other regions without the insight gained from these briefings and NEBHE's consistent efforts over the past eight years." The regional Legislative Advisory Council has confirmed this view by recommending that the program be continued on a biennial basis.

FINANCIAL STATUS REPORT

(Follow instructions on the back)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED
Department of Education

2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER
G008302726

OMB Approved No. 80-RO180

PAGE 1 OF 1 PAGES

3. RECIPIENT ORGANIZATION *(Name and complete address, including ZIP code)*

New England Board of Higher Education
45 Temple Place
Boston, MA 02111

4. EMPLOYER IDENTIFICATION NUMBER
1042-207-418A1

5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER
6041G

6. FINAL REPORT
☒ YES ☐ NO

7. BASIS
☐ CASH ☒ ACCRUAL

8. PROJECT/GRANT PERIOD *(See instructions)*
FROM *(Month, day, year)* 9/1/83
TO *(Month, day, year)* 8/31/86

9. PERIOD COVERED BY THIS REPORT
FROM *(Month, day, year)* 9/1/85
TO *(Month, day, year)* 8/31/86

10. STATUS OF FUNDS

PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a) FISPE	(b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	$ 289,655	$	$	$	$	$	$ 289,655
b. Total outlays this report period	142,387						142,387
c. *Less:* Program income credits	------						-0-
d. Net outlays this report period *(Line b minus line c)*	142,387						142,387
e. Net outlays to date *(Line a plus line d)*	432,042						432,042
f. *Less:* Non-Federal share of outlays	244,925						244,925
g. Total Federal share of outlays *(Line e minus line f)*	187,117						187,117
h. Total unliquidated obligations	-0-						-0-
i. *Less:* Non-Federal share of unliquidated obligations shown on line h	-0-						-0-
j. Federal share of unliquidated obligations	-0-						-0-
k. Total Federal share of outlays and unliquidated obligations	187,117						187,117
l. Total cumulative amount of Federal funds authorized	189,009						189.009
m. Unobligated balance of Federal funds	1,892						1,892

11. INDIRECT EXPENSE

a. TYPE OF RATE *(Place "X" in appropriate box)* ☐ PROVISIONAL ☐ PREDETERMINED ☐ FINAL ☒ FIXED

b. RATE	c. BASE	d. TOTAL AMOUNT	e. FEDERAL SHARE
45.7%	97,726	44,661	20,450

12. REMARKS: *Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.*

13. CERTIFICATION
I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL
Melvin H Bernstein

DATE REPORT SUBMITTED
11/21/86

TYPED OR PRINTED NAME AND TITLE
Melvin H. Bernstein
FIPSE Proj. Director

TELEPHONE *(Area code, number and extension)*
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THE NEW ENGLAND BOARD OF HIGHER EDUCATION

THE PUBLIC INVESTMENT IN HIGHER EDUCATION

Special Policy Briefing
For
Connecticut Legislators
1986

A New England Regional Project Supported by
the Fund for the Improvement of Postsecondary Education

The Public Investment in Higher Education

The following is a report of a special policy briefing held by the New England Board of Higher Education (NEBHE) in January 1986 for Connecticut legislators. The briefing was part of a series of briefings for the region's legislators on the public investment in higher education in New England; it was funded in part by a grant from the U.S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE). The purpose of the project is to inform legislators about what they have neither the time nor the resources to learn for themselves about higher education and its relationship to economic development. To guide the project, NEBHE has established a Legislative Advisory Council of leaders from the six New England states. Special briefings for legislators have been conducted in each of the six New England states. The Connecticut briefing was the fifth program of the series. Previous briefings were held in New Hampshire in November 1983, in Rhode Island in April 1984, in Massachusetts in November 1984, and in Vermont in February 1985. The final briefing was held in Maine in February 1986.

"We are trying to improve our performance as legislators, and we are going to the right people, the New England Board of Higher Education, to find out what we need to do to improve the quality of higher education in this state. We want to do better."

Senator M. Adela Eads

Higher Education: New England's Critical Resource

Higher education in New England is a unique resource. New England is more successful in attracting college students than any other section of the nation, primarily because of the excellence of its public and independent colleges and universities. With 260 institutions of higher learning located in six states and with a population of 12.5 million people, New England is the most knowledge-intensive region in the country and probably the world. The region has 50 percent more institutions of higher education per capita (and nearly twice as many independent institutions per capita) than the nation as a whole, although regional population accounts for only 5.3 percent of the country's total population. Higher education contributes substantially to the region's economy, through both direct expenditures, and educational and research contributions to the region's economic growth and development.

House Speaker Ralph E. Van Norstrand and NEBHE President John C. Hoy.

"There has been a major shift in the nature of the regional economy. We have the lowest unemployment and highest regional per-capita income in the nation. The basic economy of New England depends on higher education. Our region is blessed with a highly intelligent, professional workforce; and that human infrastructure is the single greatest advantage we enjoy in competition with other regions and countries. It has been the reason for the turnaround in the New England economy."

John C. Hoy
President, NEBHE

Retraining the Workforce for Future Growth

Connecticut enjoys a strong position in the nation's economy. It has a diversified economy, high per capita income, and low unemployment. The quality of the labor force, however, depends on the availability of training and continuing education programs for residents in response to industry's need for new skills. Economists predict that in the next decade the number and nature of jobs in each sector of the economy will change significantly. Specifically, they say that the service sector of the economy will grow dramatically, while the number of manufacturing jobs will stabilize or decline slightly. High-technology manufacturing industries will grow at a moderate rate. Strong growth is predicted in the financial services, health care, education, and personal service industries. In order to achieve this economic shift, a significant commitment must be made to continuing the education and retraining of Connecticut's resident workforce, rather than looking to an in-migrating population to fill jobs requiring new skills. Future economic growth depends upon an educated workforce.

"To keep Connecticut's economic resurgence on track, we must remember that it is these people between the ages of 35 and 55 who comprise the largest sector of our population in need of retraining by both public and private higher education, so that they will be able to find a place for themselves in a service economy. We have to design and expand non-traditional systems and improve our vocational counseling and on-the-job training."

President Robert E. Miller, Past Chairman
New England Board of Higher Education

Communication Between Legislators and Higher Education

According to NEBHE's New England Legislative Survey, 76 percent of the legislators in the region said they do not have enough communication with higher education. And in the State of Connecticut, approximately eight out of ten lawmakers felt that communications between higher education and the legislature were inadequate. In response to this need, we have seen a strengthening and upgrading in both the quality and quantity of information on higher education coming out of Connecticut in the past two years. In addition, a great deal of effort has been made to inform legislators about the relationship between higher education and Connecticut's economic growth. The legislative survey indicates that a substantial majority of the lawmakers in the region consider higher education an important industry in New England. However, Connecticut legislators did not support this point of view to the same extent as their colleagues in the other five New England states. This suggests that not enough work was being done to acquaint policymakers with the significant impact higher education has on economic growth. The report, "Jobs for Connecticut's Future," published earlier this year as a public/private sector strategic planning effort, makes a strong case for the important role higher education should play in a rapidly changing and increasingly technological economy.

"There's a lot at stake here: Connecticut has one of the lowest public higher education enrollments in the country relative to the state's population. This underenrollment may be an unanticipated consequence of the state's relatively low funding for higher education. It is important that Connecticut extend its recent economic gains to the much-needed financial strengthening of its higher education system and the building of the human capital needed for the balance of this century. Connecticut residents must think beyond the economic growth they presently enjoy and plan for their future needs. That planning is important: The 'Jobs for Connecticut's Future' report says that the state faces a growing human capital gap between now and 1995. Now is the time to do something about it."

Melvin H. Bernstein
Legislative Project Director

Question: Do you agree with the view that there is enough communication between New England's higher education institutions and the region's legislators on how they can help each other?

	YES	NO
Connecticut	**22.4%**	**77.6%**
Maine	20.2%	79.8%
Massachusetts	22.0%	78.0%
New Hampshire	20.7%	79.3%
Rhode Island	15.0%	85.0%
Vermont	41.0%	76.4%
Total	23.6%	76.4%

Question: "Government must be supplied with better data by academia if it is to judge the effectiveness with which higher education uses the tax revenues it receives." Do you agree with this statement?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
Connecticut	**48.7%**	**42.0%**	**5.0%**	**.8%**	**3.4%**
Massachusetts	49.5%	43.6%	3.0%	0	4.0%
Rhode Island	66.3%	20.5%	3.6%	4.8%	4.8%
Maine	50.5%	39.8%	7.8%	0	1.9%
New Hampshire	55.3%	31.8%	8.4%	2.8%	1.7%
Vermont	50.5%	37.6%	3.7%	2.8%	5.5%
Totals	53.2%	36.0%	5.6%	1.9%	3.3%

Question: Certain economic trends for both public and private higher education in your state, the region and the nation may be important. Would information on the following be useful? (Percentage responding yes.)

Trends in:	Tuition	Faculty Salaries	Fed. Grants & Contracts	Total Expenditures
Connecticut	**89.4%**	**78.4%**	**86.5%**	**86.3%**
Massachusetts	95.7%	77.4%	91.5%	87.9%
Rhode Island	90.8%	86.1%	92.1%	84.5%
Maine	90.6%	81.3%	89.4%	81.7%
New Hampshire	91.7%	77.9%	91.8%	88.5%
Vermont	90.5%	80.9%	87.9%	86.8%
Totals	91.5%	79.9%	90.0%	86.2%

Findings taken from *Renewing Excellence: The 1984 New England Legislative Survey*, New England Board of Higher Education, Boston, Massachusetts.

Private–Public Partnerships for Academic Excellence

The New England region's colleges and universities played a major role in the expansion of our economy, especially in the high technology and service industries. Cooperative planning and collaborative arrangements among educators, public policymakers and business leaders can best utilize our limited resources. Connecticut's "Centers of Excellence" program, authorized by the General Assembly in 1984, is an example of one such innovative program. The program seeks to promote academic excellence and innovation by supporting instruction, research, and public service projects on the campuses of Connecticut's public colleges. The law also mandates that funds be provided for existing programs showing promise of regional or national prominence, with monies specifically earmarked for libraries and equipment. Matching funds from business will also be used to create endowed chairs on the public college campuses. These two programs, with the proper funding, will help to attract prominent faculty members to Connecticut's public institutions, and in turn upgrade the quality of public higher education that the state offers.

NEW ENGLAND BOARD
HIGHER EDUCATION

Representative Irving J. Stolberg and Commissioner of Higher Education, Norma Foreman Glasgow.

"The higher education community working with the Legislature has tried to emphasize enhanced quality and enhanced access. I am a believer in the important role our educational system plays in assuring our quality of life and driving the economic vitality of our state. We must maintain standards of quality in higher education, ensuring a position of national leadership for Connecticut institutions while at the same time using all possible resources to guarantee access for students with various levels of academic preparedness and divergent financial resources."

Norma Foreman Glasgow
Commissioner of Higher Education

Connecticut's Institutions of Higher Learning — Strengths and Weaknesses

- Compared to the other New England states, a higher proportion of Connecticut's higher education enrollment is made up of part-time learners. The state university and community college system have responded vigorously to the needs of the adult learner.
- Connecticut's high proportion of college graduates in its population ranks the state first in New England and third nationally behind Alaska and Colorado.
- Connecticut's private colleges and universities rank first in New England and second nationally in research expenditures per faculty member. However, in this same category, Connecticut's public higher education system ranks 42nd on a national scale.

Years of School Completed by New England Adults 25 Years and Older, 1980 Census

	High School Graduate	College Graduate
Connecticut	**70.5%**	**21.2%**
Maine	68.5%	14.0%
Massachusetts	72.7%	20.0%
New Hampshire	72.0%	18.4%
Rhode Island	60.7%	15.3%
Vermont	70.5%	19.6%
U.S. Average	66.3%	16.3%

Source: U.S. Census Bureau

New England High School Graduation Rates

State	1982 Percentage and rank	1984 Percentage and rank
Connecticut	**70.6 (33)**	**79.1 (11)**
Maine	72.2 (28)	77.2 (15)
Massachusetts	76.4 (13)	74.3 (28)
New Hampshire	77.0 (11)	75.2 (22)
Rhode Island	72.7 (25)	68.7 (38)
Vermont	79.6 (8)	83.1 (7)

Source: U.S. Department of Education, Office of Planning, Budget and Evaluation, February 1986

- Connecticut ranks 50th in the nation relative to enrollments in public institutions of higher education.
- The state also ranks last in the nation in the proportion of the state budget allocated to public higher education. The amount appropriated is approximately half of the United States' average.
- Connecticut is responding to its higher education funding needs now by increasing appropriations by 21 percent over the past two years, ranking it 19th nationally.

"We have to bring public and private higher education closer together and get the best from both. We have the tax capacity to do so. We must also pay more attention to minorities in higher education—attention proportionate to their needs. This means working with the primary and secondary schools to help minorities gain the intellectual skills they must have to succeed at the university level."

Representative Irving J. Stolberg

Factors in State Support of Public Higher Education, 1984–85

State	Appropriations per student (in dollars)	National Rank	Tuition per student (in dollars)	National Rank
Connecticut	**$3,314**	**23**	**$1,197**	**18**
Maine	$3,186	30	$1,499	9
Massachusetts	$4,034	9	$ 902	39
New Hampshire	$1,856	51	$2,836	2
Rhode Island	$3,845	11	$1,425	11
Vermont	$1,905	50	$3,545	1

* District of Columbia included in rankings

Source: "How States Compare in Financial Support of Public Higher Education 1984–85," National Institute of Education.

Appropriations of State Tax Funds for Operating Expenses of Higher Education (in $ millions)

	1983–84	1984–85	1985–86	% Gain 1983–84 to 1985–86	National Rank on 2-Year Gain
Conn.	**$273.7**	**$302.9**	**$329.9**	**21%**	**19**
Mass.	$537.2	$641.3	$711.1	32%	4
R.I.	$ 97.7	$105.3	$110.4	13%	38
Maine	$ 76.7	$ 81.6	$100.9	32%	5
N.H.	$ 41.1	$ 42.6	$ 50.3	22%	17
Vermont	$ 40.3	$ 41.7	$ 44.6	11%	39

Source: M.M. Chambers, *Appropriations of State Tax Funds for Higher Education.* (National Association of State University and Land Grant Colleges).

High-Technology Employment as a Percent of Total Nonagricultural Employment

State	1983	National Rank
Connecticut	**12.2**	**2**
Massachusetts	11.5	3
New Hampshire	11.1	4
Vermont	9.6	7
Rhode Island	4.2	32
Maine	3.0	43
U.S. Average	6.3	

Based on utilization of technology-oriented workers and research and development expenditures.

Source: Monthly Labor Review, U.S. Department of Labor, Bureau of Labor Statistics, May 1985. NEBHE analysis 1/21/86

Representative Elsie Swenson of Manchester.

Interstate Cooperation: The Regional Student Program

NEBHE's Regional Student Program (RSP) continues to be a national model of interstate cooperation. Over 50,000 students have participated in the RSP since its inception in 1957. The RSP enables residents of the six New England states to enroll in out-of-state public colleges and universities within the six-state region at reduced tuition rates for degree programs not available at their home states' campuses. The RSP reduces costs, increases academic options for students and avoids duplication of academic programs within the New England region. It is the largest program of its kind for undergraduates in the United States.

Connecticut remained a net exporter of students for the twelfth consecutive year in 1984-85: 987 residents attended out-of-state institutions while 475 entered the state through the program. During 1984-85 Connecticut's participating residents saved an average of $2,295 each in tuition charges through the RSP.

Speaker Ralph Van Norstrand, Commissioner of Higher Education Norma Foreman Glasgow and Stephen J. Trachtenberg, President of The University of Hartford.

"The New England Board of Higher Education has done a great deal to foster regional cooperation between the six New England states and the public and independent institutions of higher education. Connecticut residents benefit both academically and financially from our participation in the Regional Student Program. They are given choices that they might otherwise not have."

Representative Ralph Van Norstrand
Speaker of the House

The out-of-state programs attracting the most Connecticut residents are: hotel, restaurant, and travel administration at the University of Massachusetts at Amherst; forestry at the University of Maine at Orono; mechanical and ocean engineering, and management information systems at the University of Rhode Island; hotel administration and occupational therapy at the University of New Hampshire; textile marketing at the University of Rhode Island; recreation management at the University of Vermont; library science at the University of Rhode Island; and meteorology at Lyndon State College in Vermont.

The three programs that in-migrating students find most popular are social work (MSW), pharmacy (five-year program) and law (J.D.) at the University of Connecticut.

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Representative
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Senator
Assistant Majority Leader

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Representative
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January 1986

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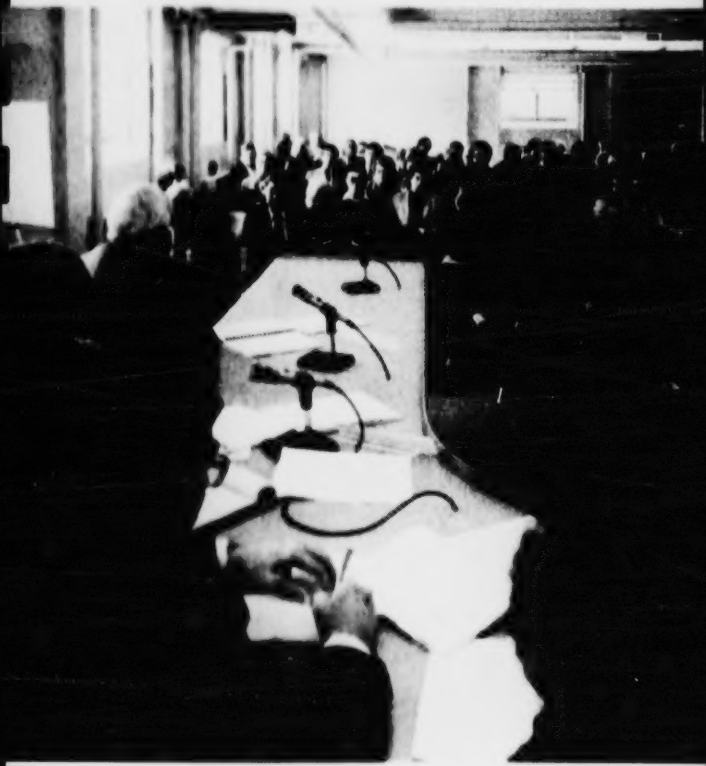
THE NEW ENGLAND BOARD OF HIGHER EDUCATION



THE PUBLIC INVESTMENT IN HIGHER EDUCATION

Special Policy Briefing
For
Maine Legislators

1986

A New England Regional Project Supported by
the Fund for the Improvement of Postsecondary Education

0: 26

Agenda

Policy Briefing for Maine Legislators
Wednesday, February 19, 1986
The State House
Augusta, Maine

Convener
Representative Nathaniel J. Crowley, Sr.
Vice Chairman, New England Board of Higher Education

Welcome
Senator Charles P. Pray
President of the Senate

"Underutilizing Maine's Higher Education System"
Melvin H. Bernstein
Legislative Project Director
New England Board of Higher Education

"Linkages between Higher Education and
Maine's Economic Growth"
John C. Hoy, President
New England Board of Higher Education

Discussion

Panel
Representative Edith S. Beaulieu
Chairman, Labor Committee
Appearing for
Representative John L. Martin
Speaker of the House of Representatives

Senator Thomas R. Perkins
Minority Leader

Senator Nancy Randall Clark
Assistant Majority Leader

Representative Neil Rolde
Chairman, Audit and Program Review Committee

The Public Investment in Higher Education

The following is a report of a special policy briefing held by the New England Board of Higher Education (NEBHE) in February 1986 for Maine legislators. The briefing is part of NEBHE's regional economic development project on the public investment in higher education in New England; it was funded in part by a grant from the U.S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE). The purpose of the project is to inform legislators about what they have neither the time nor the resources to learn for themselves about higher education and its relationship to economic development. To guide this project, NEBHE has established a Legislative Advisory Council of leaders from the six New England states. A special policy briefing for legislators has been conducted in each of the six New England states. The Maine briefing was the sixth program of the series. Briefings were also held in New Hampshire in November 1983, in Rhode Island in April 1984, in Massachusetts in November 1984, in Vermont in February 1985, and in Connecticut in January 1986.

Senator Nancy Randall Clark, Melvin H. Bernstein and John C. Hoy, of NEBHE

"This forum is a unique opportunity for us to share in the dissemination of information as we turn our attention collectively to the future of higher education and our state's economic potential."

Senator Nancy Randall Clark
Assistant Majority Leader

Communication Between Legislators and Higher Education

According to NEBHE's 1984 New England Legislative Survey, 76 percent of the legislators in the region believe communications are inadequate between higher education and themselves on how they can help each other. And in the state of Maine, eight out of ten lawmakers felt that communications between higher education and the legislature were inadequate. In particular, legislators prefer knowing how higher education contributes to economic development and getting forthright reports on student educational proficiency. Most legislators, not only those on education committees, are interested in hearing higher education's message.

Maine's Education Reform Act of 1984 demonstrated its commitment to public elementary and secondary education. A provision of the law calls for an annual report by the Commissioner of Educational and Cultural Services to the Governor and the Legislature, using the latest available data on the status of public education in Maine with suggestions and recommendations for its improvement. Maine legislators have indicated that they prefer annual information on the progress made by the educational system they finance each year through the budget process. The Reform Act also demonstrates their serious interest in strengthening the elementary and secondary school foundation critical for successful postsecondary and graduate-level work. It is an investment in the state's future economic and cultural health.

"We seek a significant increase in the dialogue between the Chancellor's office and the Legislature in order to properly judge the effectiveness of our higher education expenditures. Both parties have the responsibility to cooperate and communicate in order to establish the direction and mission of our university system."

Representative Neil Rolde

Question: Do you agree with the view that there is enough communication between New England's higher education institutions and the region's legislators on how they can help each other?

	YES	NO
Connecticut	22.4%	77.6%
Maine	**20.2%**	**79.8%**
Massachusetts	22.0%	78.0%
New Hampshire	20.7%	79.3%
Rhode Island	15.0%	85.0%
Vermont	41.0%	59.0%
Total	23.6%	76.4%

Question: "Government must be supplied with better data by academia if it is to judge the effectiveness with which higher education uses the tax revenues it receives." Do you agree with this statement?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
Connecticut	48.7%	42.0%	5.0%	.8%	3.4%
Maine	**50.5%**	**39.8%**	**7.8%**	**0**	**1.9%**
Massachusetts	49.5%	43.6%	3.0%	0	4.0%
Rhode Island	66.3%	20.5%	3.6%	4.8%	4.8%
New Hampshire	55.3%	31.8%	8.4%	2.8%	1.7%
Vermont	50.5%	37.6%	3.7%	2.8%	5.5%
Totals	53.2%	36.0%	5.6%	1.9%	3.3%

Question: Certain economic trends for both public and private higher education in your state, the region and the nation may be important. Would information on the following be useful? (Percentage responding yes.)

Trends in:	Tuition	Faculty Salaries	Fed. Grants & Contracts	Total Expenditures
Connecticut	89.4%	78.4%	86.5%	86.3%
Maine	**90.6%**	**81.3%**	**89.4%**	**81.7%**
Massachusetts	95.7%	77.4%	91.5%	87.9%
Rhode Island	90.8%	86.1%	92.1%	84.5%
New Hampshire	91.7%	77.9%	91.8%	88.5%
Vermont	90.5%	80.9%	87.9%	86.8%
Totals	91.5%	79.9%	90.0%	86.2%

Findings taken from "Renewing Excellence: The 1984 New England Legislative Survey," sponsored by the New England Board of Higher Education.

Higher Education: New England's Critical Resource

Higher education in New England is a unique resource. New England is more successful in attracting new college students than any other section of the nation, primarily because of the excellence of its public and independent colleges and universities. With 260 institutions of higher learning located in six states with a population of 12.5 million people, New England is the most knowledge-intensive region in the country and probably in the world. The region has 50 percent more institutions of higher education per capita (and nearly twice as many independent institutions per capita) than the nation as a whole, although the regional population accounts for only 5.3 percent of the country's total population. Higher education contributes substantially to the region's economy, through both direct expenditures and the educational and research contributions to the region's economic growth and development. In a recent NEBHE survey, 87 percent of Maine's legislators agreed that higher education is a major industry in the region.

Representative William Lawrence of West Newfield

"Higher education is now the 'rockbed' of the New England economy. We have the lowest unemployment and highest regional per-capita income in the nation. We are blessed by a highly intelligent, professional workforce, and that knowledge base is New England's unique advantage in competing with other regions of the United States and the nations of the world. Frankly, it is the leading competitive reason for the turnaround in the New England economy."

John C. Hoy, President
New England Board of Higher Education

Maine's Investment in Higher Education

It is vital to the development of a well-balanced, highly-skilled workforce that Maine continues to upgrade its investment in higher education. No other public investment will produce as high a rate of return to the economy in the form of increased productivity as education, particularly higher education. The New England economy is experiencing a strong resurgence, much to the credit of our public and independent institutions of higher education. We have developed an economy that is based primarily upon new technology and the application of new technology to traditional industries, and have moved away from its mature manufacturing base. Maine, as well as other New England states, has seen diminished activity in the area of former patterns of traditional industrial production and increased attention focused on advanced technical processes and advanced professional services. Higher education is a key ingredient in this formula for economic development. The degree to which funding is available for targeted new programs has a direct impact on where economic growth will occur.

> **"New England's strategic plan for economic development is undergirded by a strong intellectual infrastructure. Maine has to use its potential to expand specific degree programs in business administration, engineering and computer sciences if the state is to succeed in creating the basic building blocks for economic development. Maine needs to increase its own base of professional and knowledge workers if it is to hold its own with the rest of New England."**
>
> **Melvin H. Bernstein**
> **Legislative Project Director**

Maine's appropriation of funds to higher education is low when compared to regional and national norms. Based on the percentage of tax revenues allocated from the state budget to higher education, Maine ranks 41st in the nation. Tuition is high; student financial aid appropriations are low. Salaries for faculty are below the national average and academic support funds for libraries and research facilities are clearly insufficient. It is encouraging, however, that state appropriations for the past two years have been increasing at a rate well above the national norm, placing Maine 5th nationally.

The Legislature is studying this situation in the wake of a comprehensive report from the Visiting Committee to the University of Maine, a blue ribbon committee which issued substantive recommendations following a year-long evaluation of the University system at the request of Governor Joseph Brennan.

In response, the Governor has proposed that the Legislature appropriate a $15 million down payment to the university system. The money will go to the needs identified by the Visiting Committee, with $8.5 million allocated to the University at Orono for faculty development, equipment, student aid, library books and for other deficiencies identified by the Trustees. His proposal calls for a $4.1 million allocation to the University of Southern Maine to hire full-time faculty, to strengthen the undergraduate program, and to increase their library holdings. The regional baccalaureate colleges at Fort Kent, Presque Isle, Machias, and Farmington would receive $1.7 million for student aid, building maintenance, and faculty support if the Legislature supports the Governor's request.

"This year we are confronting a once in a generation opportunity to renew higher education in Maine for all of the Maine people. If we miss this chance, we may not have another for some time to come. We cannot let this historic opportunity slip by over concern for fleeting political advantage."

Governor Joseph E. Brennan

Appropriations of State Tax Funds for Operating Expenses of Higher Education (in $ millions)

	1983–84	1984–85	1985–86	% Gain 1983–84 to 1985–86	National Rank on 2 Year Gain
Conn.	$273.7	$302.9	$329.9	21%	19
Maine	**$ 76.7**	**$ 81.6**	**$100.9**	**32%**	**5**
Mass.	$537.2	$641.3	$711.1	32%	4
N.H.	$ 41.1	$ 42.6	$ 50.3	22%	17
R.I.	$ 97.7	$105.3	$110.4	13%	38
Vermont	$ 40.3	$ 41.7	$ 44.6	11%	39

Source: M.M. Chambers, *Appropriations of State Tax Funds for Higher Education* (National Association of State University and Land Grant Colleges)

The Maine Public Higher Education System: Strengths and Weaknesses

- Maine is a tax-poor state. It ranks only 43rd in the country in tax capacity. However, Maine's tax effort is substantial, placing the state 10th in the nation.
- Maine ranks 20th in the United States in government grants and contracts per faculty member and third in New England. Ninety-four percent of Maine's research and development funds for the fields of science and engineering are received by the Orono campus alone, inclusive of all public and private institutions in the state as seen below.

Government Grants and Contracts
Per Faculty Member, Public Institutions
New England States
FY 1982*

State	Dollar Amount	National Rank
Connecticut	$14,971	43
Maine	**$20,817**	**20**
Massachusetts	$11,794	50
New Hampshire	$19,183	26
Rhode Island	$24,279	15
Vermont	$35,058	5
U.S. Average	$20,472	

*Most recent year for which data are available. District of Columbia included in rankings

Source: "Higher Education Financing in the Fifty States," National Institute of Education and the National Center for Higher Education Management Systems, November 1984.

- Maine charges a high tuition rate for students enrolled in public higher education, ranking 9th nationally.
- Maine ranks a notable 7th highest in the nation in its high school graduation rate. But as far as college graduates in the population are concerned, Maine ranks below the national average and has the lowest proportion of college graduates of any of the six New England states. An insufficient number of Maine high school graduates seek postsecondary education.
- State scholarship aid in Maine is the lowest of the six New England states per capita. Financial aid for Maine students ranks at one-sixth of the national average per capita.

- Maine is relatively more generous than other states in funding public service programs other than higher education. Maine ranks as high as 7th in the nation for per capita expenditures on public welfare. Expenditures for the highway system are also above the national average. And the state ranks 15th in interest paid per capita on the general debt.

High-Technology Employment as a Percent of Total Nonagricultural Employment

State	1983	National Rank
Connecticut	12.2	2
Maine	**3.0**	**43**
Massachusetts	11.5	3
New Hampshire	11.1	4
Rhode Island	4.2	32
Vermont	9.6	7
U.S. Average	6.3	

Based on utilization of technology-oriented workers and research and development expenditures.

Source: Monthly Labor Review, U.S. Department of Labor, Bureau of Labor Statistics, May 1985. NEBHE analysis 1/21/86

Factors in State Support of Public Higher Education, 1984–85

State	Appropriations per student (in dollars)	National Rank	Tuition per student (in dollars)	National Rank
Connecticut	$3,314	23	$1,197	18
Maine	**$3,186**	**30**	**$1,499**	**9**
Massachusetts	$4,034	9	$ 902	39
New Hampshire	$1,856	51	$2,836	2
Rhode Island	$3,845	11	$1,425	11
Vermont	$1,905	50	$3,545	1

* District of Columbia included in rankings

Source: "How States Compare in Financial Support of Public Higher Education 1984–85," National Institute of Education.

Federal Obligations to Universities and Colleges
FY 1983
(Dollars in thousands)

State and Institution	Total	U.S. Department of Education	National Science Foundation
Maine Total	**$17,369**	**$8,331**	**$1,829**
Bangor Theol. Seminary	18	18	0
Bates College	140	102	38
Beal College	1	1	0
Bowdoin College	340	275	65
Casco Bay College	72	72	0
Colby College	105	105	0
College of the Atlantic	32	28	0
Eastern Maine Voc Tech Inst.	94	94	0
Husson College	316	316	0
Maine Maritime Academy	127	127	0
Nasson College	43	43	0
St. Joseph's College	102	102	0
Thomas College	136	136	0
Unity College	141	141	0
U of Maine, Presque Isle	604	604	0
U of Maine, Augusta	423	423	0
*U of Maine, Orono	10,996	2,540	1,706
U of Maine, Farmington	625	624	0
U of Maine, Fort Kent	215	215	0
U of Maine, Machias	290	290	0
U of Maine, Bangor	20	0	20
U of New England	357	141	0
U of Southern Maine	2,049	1,811	0
Westbrook College	123	123	0

***Note:** In addition to the categories indicated, University of Maine, Orono received $4,284,000 from USDA, $1,350,000 from COM, $93,000 from DOD, $216,000 from DOE, $84,000 from EPA, $301,000 from HHS, and $406,000 from INT.

Source: NEBHE Analysis of National Science Foundation, *Federal Support to Universities, Colleges and Selected Non-Profit Institutions, FY 1983.*

Representative Eleanor Murphy and Representative Alberta Wentworth

Increasing Higher Education Enrollment

Various studies of education in Maine have touched on student academic proficiency and its relationship to career choices. Maine students need to better understand the economic consequences of their educational choices. A low proportion of homegrown college graduates prevents Maine residents from obtaining many of the better jobs in the state, which often go to the better-educated in-migrating people with professional and technical degrees. Two-thirds of the Maine students attending the University of Maine at Orono, according to a 1983 survey, were the first members of their families to attend college. Adequate guidance programs and encouragement are extremely important to encourage these students through two- or four-year college programs, and possibly graduate studies.

When compared to the other five New England states, it is obvious that public policy in Maine should address the professional and technical training needs of the state, particularly at the graduate level in such fields as engineering, computer science and business administration. The role of trained specialists is critical for the emergence of new corporate and industrial enterprises, and without educated manpower the Maine economy operates at a severe disadvantage, both regionally and nationally. The University system has the potential to train such individuals, as is

"We have recently seen small but significant increases in funding for Maine's vocational technical institutes. The training and retraining opportunities that these facilities provide are a crucial part of the plan to develop our state's full economic potential through meeting the needs of industry."

Representative Nathaniel J. Crowley, Sr.

Representative Ruth Joseph of Waterville

demonstrated by its ability to obtain federal research dollars, but more students must be encouraged to take advantage of the higher education opportunities available throughout the state.

The University of Southern Maine in Portland has grown to be the second largest institution of higher education in Maine. A significant number of the university's 8,800 students are enrolled in part-time programs, allowing them to upgrade their skills while remaining in the workforce. The University also has responded to the interests of the business community in southern Maine with additional baccalaureate and graduate programs in science and engineering.

Years of School Completed by New England Adults 25 Years and Older, 1980 Census

	High School Graduate	College Graduate
Connecticut	70.5%	21.2%
Maine	**68.5%**	**14.0%**
Massachusetts	72.7%	20.0%
New Hampshire	72.0%	18.4%
Rhode Island	60.7%	15.3%
Vermont	70.5%	19.6%
U.S. Average	66.3%	16.3%

Source: U.S. Census Bureau

The Regional Student Program

NEBHE's Regional Student Program (RSP) continues to be a national model of interstate cooperation. Over 50,000 students have participated in the RSP since its inception in 1957. The RSP enables residents of the six New England states to enroll in out-of-state public colleges and universities within the six-state region at reduced tuition rates for degree programs not available at their home states' campuses. The RSP reduces costs, increases academic options for students and avoids duplication of academic programs within the New England region. It is the largest program of its kind in the United States.

Maine continued as a net importer of students in 1984–85, with 452 students entering the state and 349 residents studying at public institutions out-of-state under the Regional Student Program. In its twelfth year as an importer of regional students, Maine moved closer to achieving a balance between in-migrating and out-migrating participants. Total estimated savings in tuition charges to Maine residents reached $855,462 in 1984–85. Maine's average individual RSP savings were the second highest in the region at $2,451 per student.

RSP students attending Maine institutions were enrolled in over 45 percent of the 155 courses of study available to them. Nearly half of the out-of-state RSP students in Maine institutions were enrolled in the following University of Maine programs: Special Education at the University of Maine at Farmington; Forestry and Forest Engineering at the University of Maine at Orono; and Law at the University of Maine School of Law.

Maine's 349 out-migrating students were enrolled in nearly 23 percent of the available out-of-state programs. Over one-quarter of these students were enrolled in four University programs: Pharmacy (five-year bachelor's program) at the Universities of Connecticut and Rhode Island, as well as Health Administration and Planning and Occupational Therapy at the University of New Hampshire.

Representative John E. Masterman and Dr. Charles Lawton, Executive Director of the Visiting Committee to the University of Maine

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February 1986

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NEW ENGLAND BOARD OF HIGHER EDUCATION

THE PUBLIC INVESTMENT IN HIGHER EDUCATION

A Report of A Policy Briefing for Legislators from

MASSACHUSETTS

"Massachusetts cannot afford to tolerate wasteful competition between public and independent colleges and universities. If we had not seen significant progress in both sectors in the last few years, we would not have seen progress for either. Public-independent campus collaboration is still in its infancy and must be encouraged by state government and the Board of Regents in behalf of the educational needs of the people of the Commonwealth. Effective public-independent academic consortia will characterize future educational ventures in Massachusetts."

John C. Hoy, President
New England Board of Higher Education

A Regional Project
supported by
The Fund for the Improvement of
Postsecondary Education

"Over the past few years, Massachusetts has taken a major leadership role in New England and in the nation in the funding of higher education. We are here today because we look to Massachusetts for leadership and because we think that the public policy role of the Legislature is critical to the proper development of higher education in the decade ahead. We hope that the information we provide will reinforce what you already know and perhaps give you additional insight. A well-informed legislature in each of the New England states is critical to the farsighted development of the region as a whole."

Robert J. McKenna, Chairman
New England Board of Higher Education

The Public Investment in Higher Education

The following is a report of a special policy briefing held by the New England Board of Higher Education (NEBHE) in November, 1984 for Massachusetts state legislators. The briefing is part of a NEBHE regional economic development project focused on the public investment in higher education in New England funded by the national Fund for the Improvement of Postsecondary Education (FIPSE). Under the terms of the award, NEBHE has established a Legislative Advisory Council comprised of leadership from the six New England states. A special policy briefing for legislators has been planned for each New England state. The briefing reported here is the third in a series of six. Briefings were held in New Hampshire in November 1983, and in Rhode Island in April 1984.

Agenda

Special Policy Briefing for Massachusetts Legislators
Tuesday, November 13, 1984
The State House
Boston, Massachusetts

Welcome

Senator Gerard D'Amico
Vice Chairman, New England Board of Higher Education

Introduction

Senator Robert J. McKenna
Chairman, New England Board of Higher Education
Chairman, Senate Finance Committee, Rhode Island

A Turning Point for the Higher Education System in Massachusetts

Melvin H. Bernstein
FIPSE Project Director
New England Board of Higher Education

Deciding on Excellence: Massachusetts' Unique Potential for National Leadership

John C. Hoy
President
New England Board of Higher Education

Discussion

Moderator

Senator Gerard D'Amico
Chairman, Senate Committee on Education
Massachusetts Delegate to New England Board of Higher Education

Representative James G. Collins
Chairman, House Committee on Education
Massachusetts Delegate to New England Board of Higher Education

John B. Duff
Chancellor, Board of Regents of Higher Education
Massachusetts Delegate to New England Board of Higher Education

Rev. Bartley MacPhaidin
Chairman, Association of Independent Colleges and Universities of Massachusetts
President, Stonehill College

Commonwealth Reveals Growing Support for Higher Education

Throughout the United States in recent years, state government has become the principal funding source for higher education. Nearly half of all expenditures for higher education come from government (48 percent) and of that half, about two-thirds of those resources are provided by state government. The state share has risen as federal and local shares of aid to higher education have fallen. This burden has been shouldered with energy and determination by the Massachusetts Legislature.

State legislators across the country are to be commended for meeting the challenges to higher education imposed by contracting economic growth and eroding federal support. The Commonwealth of Massachusetts' resurgent commitment to excellence in higher education is among the most notable accomplishments of the period. In the last two fiscal years Massachusetts has increased its support of higher education by a remarkable 36 percent—earning the state a rank of first in the nation in percentage increase in appropriations for higher education during this period.

The Dukakis administration, in cooperation with the Massachusetts Legislature, deserves a great deal of credit for protecting educational opportunities for students in the Commonwealth. The increases in financial assistance for higher education have gone a long way in assuring the continued strength of institutions of higher learning in Massachusetts and contributing to the future competitiveness of the educated workforce of the state.

"There should be praise for the work of state legislators and their support of higher education, because state government, led by legislators, has clearly responded to the financial challenges of recent years. Massachusetts has made rapid strides and is now exercising the leadership nationally that one would expect from the state with the richest heritage in higher education."

Melvin Bernstein, FIPSE Project Director
New England Board of Higher Education

Massachusetts, which has a deep tradition, dating from the 17th century, of commitment to higher education, has not always been forthcoming in its public support for educational institutions. As recently as three years ago, in 1981, the state ranked 50th in the nation in per capita support for higher education. The increase in appropriations over the last three years has brought that ranking to 30th—a significant improvement. The increase in actual dollars appropriated is equally dramatic. In 1981 Massachusetts' higher education budget was $417 million—in 1984, it had increased by over $200 million to $640 million in higher education appropriations. Concurrently, as an expression of support for the development of human capital in the Commonwealth, the state has increased scholarship funds dramatically, from $19 million in 1983 to $50 million in 1984.

> **"We have to make a very effective case, both in the public and independent sectors, for this kind of magnificent support in general funding and scholarship funding to continue. I think that case can be made, because I believe that higher education is the glory of Massachusetts."**
>
> **John Duff, Chancellor**
> **Massachusetts Board of Regents**

The New England Board of Higher Education's 1984 New England Legislative Survey provides further evidence of the Commonwealth's support of higher education. The survey revealed that 97 percent of Massachusetts legislators give the Commonwealth's institutions of higher education a "good" or "excellent" rating. Based on clear evidence of confidence in its institutions of higher education, 82 percent of Massachusetts legislators favor further increases in public support for higher education, and 70 percent support both property tax exemptions for colleges and universities and a partial state reimbursement to towns losing revenues as a result of those tax exemptions.

In 1985, Massachusetts continues to reassert its claim to national leadership in defining what higher education needs and what it can contribute to the quality of social and economic life of the Commonwealth. But there is still much work to be done.

Commonwealth Must Address Adult Education Needs

Of primary public policy importance is the need to address the problems of the almost one million adults aged 25 or older in Massachusetts who have not graduated from high school. Those adults, close to 30 percent of Massachusetts' adult population, will find themselves increasingly shut out of a job market which requires education and training in order to fully participate in the Commonwealth's technology-based economy.

Massachusetts policy makers have demonstrated a willingness to take on the problem of the educational preparedness of its citizens through consideration of a substantial reform package for the Commonwealth's elementary and secondary schools. However, creative alternatives must be provided for adults who find it difficult to return to the traditional schoolhouse, but who deserve programs providing high school equivalency diplomas and vocational and technical training that will help them to keep pace with emerging technologies and job market conditions. These programs must be expanded.

Total Appropriations of State Tax Funds for Operating Expenses of Higher Education (in $ millions)

	1973–74	1981–82	1982–83	1983–84	1984–85	% gain 1982–83 to 1984–85	National Rank on Gain
CT	$119.9	$229.4	$252.6	$273.7	$302.9	20%	10
MA	176.7	417.9	473.0	537.2	641.3	36%	1
RI	42.4	81.6	91.1	97.7	105.3	16%	22
ME	39.8	66.9	73.2	76.7	81.6	11%	37
NH	17.4	19.1	35.2	41.1	42.6	21%	8
VT	18.5	33.9	37.7	40.3	41.7	13%	27

Source: NEBHE Analysis—M.M. Chambers, *Appropriations of State Tax Funds for Higher Education.* (National Association of State University and Land Grant Colleges)

Appropriations of State Tax Funds for Operating Expenses of Higher Education *Per Capita*

	1982–83	1983–84	1984–85	National Rank 1984–85	New England Rank 1984–85
CT	$ 80.11	$ 86.80	$ 97.00	41	4
MA	71.34	92.93	111.50	30	1
RI	95.09	101.98	110.82	33	2
ME	63.46	67.70	71.83	37	3
NH	37.01	43.22	44.69	50	6
VT	73.06	78.10	79.51	47	5
US	104.74	110.05	120.88		

Source: NEBHE Analysis—M.M. Chambers, *Appropriations of State Tax Funds for Higher Education.* (National Association of State University and Land Grant Colleges) and 1984 Statistical Abstract of the U.S.

U.S. Funds for Colleges and Universities

Institution	Research and Development Amount	Research and Development Rank	Total Federal Obligations Amount	Total Federal Obligations Rank
MIT	$148,817,000	2	$164,182,000	3
Harvard University	85,757,000	8	104,442,000	10
Yale University	78,920,000	12	97,750,000	15
Boston University	30,397,000	46	44,481,000	43
Tufts University	16,808,000	77	36,710,000	54
University of Connecticut	24,972,000	54	34,968,000	57
Woods Hole Oceanographic Inst.	32,877,000	44	34,168,000	59
Brown University	18,031,000	73	22,794,000	88
Univ. of Massachusetts, Amherst	18,034,000	72	21,913,000	92
University of Rhode Island	13,996,000	89	21,061,000	97

The issue of adult continuing and "work plan" education dovetails with the concurrent needs of educational institutions, which face a severe decline (38 percent) in college age population between 1985 and 1995, and the requirements of business and industry. Massachusetts is presently enjoying exceptionally low unemployment, but it must be remembered that the workforce in the Commonwealth is aging as fewer young people enter the job market. With the present workforce reaching the theoretical limits of "full employment", industry must retrain existing workers in order to upgrade their technical skills for new jobs. Colleges facing declining enrollments have an opportunity to use their facilities and academic resources to serve the Commonwealth's needs by joining in a retraining partnership effort. Regional and local campuses that do not actively seek to respond to the needs of the older, non-traditional student may find themselves faced with a financial crisis which could be avoided by joint strategic planning efforts with those industrial groups seeking assistance.

> **"There remains an unfulfilled mission that both schools and colleges must address—the profound need for a new system of addressing the problems of working people in New England who did not complete a secondary education—mature adults with or without skills who desire to learn how to participate fully in the new economy."**
>
> **John C. Hoy, President**
> **New England Board of Higher Education**

Among the opportunities the Commonwealth's postsecondary institutions might make available to adult students are new forms of financial assistance for adults; guidance and counseling aimed at their particular needs,

Educational Attainment

State	Population 25 Years Old and Over	0–8 Yrs.
Total U.S.	132,775,652	18.3
Connecticut	1,899,279	16.0
Maine	661,929	17.0
Massachusetts	3,463,235	13.6
New Hampshire	541,913	14.9
Rhode Island	574,890	20.5
Vermont	295,009	17.1
States With Highest Percentage of High School Graduates:		
Alaska	211,391	8.7
Utah	704,541	7.2
Colorado	1,663,192	11.0
Wyoming	255,044	9.9
Washington	2,438,501	10.8
Nevada	479,353	9.6
Montana	450,771	13.5
California	14,029,451	14.2
Hawaii	546,825	16.5
Idaho	514,236	13.5

Source: U.S. Bureau of the Census, *Provisional Estimates of Social,*
Housing, U.S. Government Printing Office: Washington,

New England Board of Higher Education, 2/85

Undergraduate State Scholarsh
Planned

State	1982** Population in Thousands	Number of Grants	1982–83 Millions of Dollars	1982 Dollars Per Capita
CT	3,153	9,700	$ 7.485	($ 2.37)
MA	5,781	26,800	$16.545	($ 2.86)
RI	958	10,977	$ 6.696	($ 6.98)
ME	1,133	1,102	$ .518	($ .45)
NH	951	1,637	$ .567	($ .59)
VT	516	7,898	$ 6.381	($12.36)

* **Source:** 15th Annual Survey Report of the National Association of State
** **Source:** Statistical Abstract of the U.S., 1984.
*** All per capita figures based on 1982 population.

Population 25 Years Old and Over—1980

vel of Education Completed (Percent)

ol		College	
4 Yrs.	1–3 Yrs.	4 Yrs. or More	Percentages High School Graduates
34.4	15.7	16.3	66.3
33.6	15.7	21.2	70.5
39.0	15.5	14.0	68.5
37.1	15.6	20.0	72.7
36.8	16.8	18.4	72.0
32.8	12.6	15.3	60.7
35.6	15.3	19.6	70.5
38.1	22.4	22.4	82.8
35.8	24.2	20.3	80.3
33.7	21.4	23.0	78.1
40.1	20.5	17.2	77.8
37.7	20.5	18.8	77.0
40.1	20.4	15.1	75.5
38.3	19.8	17.3	75.4
31.0	22.8	19.8	73.6
34.6	18.5	20.3	73.4
35.7	21.0	16.1	72.8

nic, and *Housing Characteristics*, 1980. Census of Population and
2.

ants Awarded for 1982–83 and 983–84*

	1983–84		Budgeted 1984–85	
mber of rants	Millions of Dollars	1983*** Dollars Per Capita	Millions of Dollars	Dollars*** Per Capita
1,950	$ 9.412	($ 2.99)	$ 9.876	($ 3.13)
,710	$27.101	($ 4.69)	$38.663	($ 6.69)
,842	$ 7.393	($ 7.72)	$ 7.737	($ 8.08)
2,900	$ .490	($ .43)	$ .577	($ .48)
1,443	$ .529	($ .55)	$ .593	($ .62)
,115	$ 7.114	($13.78)	$ 7.558	($14.65)

hip Grant Programs (NASSGP).

and placement credit for legitimate work experience. Industry can expand corporate incentives to employees to support their further education.

> "We believe it is important and timely for Massachusetts in 1985 to be the first state that begins to build a system to meet the needs of our knowledge-based economy and learning society."
>
> **Representative James Collins, Chair**
> **House Education Committee**

Massachusetts legislators are able, through the funding of the state's public institutions, and through tax incentives to corporations, to assume leadership roles in this effort which will gain in priority each year through the turn of the century.

Commonwealth Efforts Should be Directed to Research and Development Programs

Legislators must target priorities for the development of funding of research programs in the Commonwealth's institutions of higher education. It is well documented that the economic growth of Massachusetts, through the development of its high technology industries, is intimately linked to scientific and engineering research efforts of the state's premier institutions of higher education. Numerous examples can be given of companies now firmly established on "America's Technology Highway" circling the perimeter of Boston, whose principals developed their innovative ideas in the laboratories and classrooms of Massachusetts' institutions of higher education.

Presently, however, an imbalance exists in the distribution of federal research dollars coming into the state. According to the most recent government figures available, Massachusetts' *public* institutions of higher education rank 50th nationally in research expenditures per faculty member, and 50th nationally in government contracts and grants for faculty research on public campuses. *Private* institutions in the Commonwealth, on the other hand, rank third and fifth nationally in the same categories.

State policy makers should be encouraged to build upon the economic resurgence of the last decade in areas of research that stress continued growth and contribute to economic development by fostering superior research enterprises on public campuses. These enterprises may be modeled upon the "Centers of Excellence" concept proposed by Governor Dukakis—a concept that has been approved, though not yet funded.

The four "centers of excellence" proposed—in polymer science, biotechnology, marine sciences and photovoltaics—will all be located at the Commonwealth's public institutions of higher education, fueled with state start-up funds for research and development. The goal is to establish each center and its surrounding geographic area as an academic and economic world leader in its field.

> "Most of us in higher education in the state believe the economic resurgence of Massachusetts is closely attuned to the higher education establishment in the state. The success of the high technology industry could not have been accomplished without the agglomeration of institutions of higher education in the Commonwealth."
>
> John Duff, Chancellor
> Massachusetts Board of Regents
> for Higher Education

It is also expected that the Centers of Excellence concept will play a significant role in strengthening Massachusetts' traditional industries. The modernization of older industries through technological advances will be woven into the Centers of Excellence program, along with the training of workers to meet the challenges of new technology. The state has the capacity to train, retrain and upgrade workers in a variety of disciplines for mature and emerging industries as revealed by the success of the Bay State Skills Corporation.

Further activity will be made possible through the federal Education for Economic Security Act, signed into law by President Reagan during the summer of 1984. Title III of that act, which contains the remnants of Sen. Paul Tsongas' "High Technology Morrill Act," directs the National Science Foundation to establish a program of matching federal grants to local education agencies, institutions of higher education and states that establish partnerships in education. The $180 million—50 percent authorized by the federal government, 20 percent contributed by private industry, and 30 percent contributed by the states—will be used to initiate collaborative proposals on behalf of science, math and technology research, between education, state government and private industry.

The purpose of the legislation is not only to encourage research in these important areas, but also to insure that researchers, state government and industry share goals and information, and to distribute the burden of R & D costs more equitably between the public and private sectors.

NEBHE's 1984 New England Legislative Survey revealed that 93.5 percent of Massachusetts' legislators would favor state-level High-Tech Morrill Act legislation in Massachusetts. In fact, it is anticipated that a High-Tech Morrill Act will be introduced in the Massachusetts General Court during the 1985 legislative session.

"I think there is a clear place for Massachusetts government to invest in individual scholars and their research on the state's campuses and to make certain there is encouragement of prospective corporate donors ready and willing to add private sector leverage."

Senator Gerard D'Amico, Chairman
Senate Education Committee

The purpose of the legislation is to establish a state grants program providing matching state assistance for joint initiatives by private industry, educational institutions and state government to strengthen science, engineering and technical education for Massachusetts students. If approved by the state legislature, the program will be the first of its kind to be implemented on a state level. Scientific and technological leadership is essential to continued economic growth in Massachusetts. The Massachusetts High Technology Morrill Act concept acknowledges the need to develop the capacity to provide lifelong education and training for our technical workforce.

Public, Independent Colleges Reveal Cooperative Potential

Despite the intense competition for dwindling federal resources which exists among all institutions of higher education, there remains a spirit of cooperation between public and independent institutions of higher education in Massachusetts.

Public and private colleges have long worked in cooperative arrangements that tap the academic resources of each institution involved to expand the educational opportunities of all those participating. The five active consortia of colleges in Massachusetts include the Worcester Consortium for Higher Education, the Southeastern Association for Cooperation in Higher Education in Massachusetts (SACHEM), the Northeast Consortium of Colleges and Universities in Massachusetts (NECCUM), the Five College Consortium in the Amherst area and the Cooperating Colleges of Greater Springfield. The five consortia are composed of public and independent, two- and four-year colleges in the same geographical area, and all pool resources to create interdisciplinary studies, faculty exchanges, cross-

"The relationship between the public and private sector in the Commonwealth so far has been characterized by cooperation, by amity and by understanding. It is not for our own sakes that we are in the business of education. It is ultimately for the students, and I think if we keep them in mind, then both sectors can try to work harmoniously for their betterment."

**Rev. Bartley MacPhaidin, President
Stonehill College**

registration opportunities and joint cultural activities. In so doing, these consortia enrich the academic opportunities of students attending participating institutions, while using existing resources efficiently and reducing duplication of effort.

As a matter of sound public policy, the Massachusetts Legislature should review the experience of the existing consortia in the regions of the state to determine whether a moderate level of public expenditure could provide the leverage necessary to enlist private sector support for planning and the development of targeted programs in the regions of the state now served and in those areas where consortia do not exist.

Interstate Cooperation: The Regional Student Program

The 1983 poll by the Group Attitudes Corporation and NEBHE revealed that a clear majority of New Englanders favor greater interstate cooperation at all levels of higher education in order to reduce costs, increase academic options for students and at the same time avoid duplication of programs in adjacent states.

NEBHE's Regional Student Program (RSP), in operation for 28 years, continues to be a model program of interstate cooperation which increases educational opportunities at the post-secondary level. The RSP enables residents of the six New England states to enroll in out-of-state public colleges and universities within the six-state region at reduced tuition rates for degree programs not available at their home states' campuses.

During 1983-84, Massachusetts continued to have the highest program utilization rate of all six New England states, with residents enrolled in nearly 75 percent of the 315 programs available to students through the RSP. The Commonwealth came close to achieving a balance between incoming and outgoing New England Regional Students, with 1,747 students entering the state and 1,597 residents studying out of state.

Significant numbers of Massachusetts residents studying out of state through the RSP enrolled in programs such as pharmacy at the University of Connecticut and the University of Rhode Island, social work at the University of Connecticut, occupational therapy at the University of New Hampshire, law at the University of Maine and the University of Connecticut, special education at the University of Maine at Farmington, library science at the University of Rhode Island, and meteorology at Lyndon State College in Vermont.

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A SPECIAL POLICY BRIEFING FOR NEW HAMPSHIRE LEGISLATORS

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The New England Board of Higher Education has received a three year grant award from the national Fund for the Improvement of Postsecondary Education (FIPSE) for a regional economic development project focused on the public investment in higher education. Under the terms of the grant award an Advisory Council comprised of legislative leaders from the six New England states has been established. A special policy briefing for legislators will be held in each New England state. The briefing reported here took place in November in Concord, New Hampshire and is the first presented.

Agenda

Survey of New Hampshire Legislators.

Welcome:

Representative John B. Tucker, Speaker of the House, New Hampshire; Chairman, Caucus of New England State Legislatures.

Introduction:

Senator Robert J. McKenna, Chairman, New England Board of Higher Education; Chairman, Senate Finance Committee, Rhode Island.

Education — the Critical Resource in the Information Age:

Melvin H. Bernstein, Vice President for Research and Development, New England Board of Higher Education.

The Political Economy of New Hampshire and New England:

John C. Hoy, President, New England Board of Higher Education.

Discussion.

"We in New England have had a lead over several decades in terms of having the highest concentration of institutions of higher education of any place on the face of this earth. And it's the strong higher educational system, both public and private in New England which has enabled our economy to remain strong and vibrant. The New England area, in spite of its advantage, does have a threat to its excellence. We must be vigilant in the support of our higher educational institutions, both public and private in New England, and certainly be aware of the fact that other regions of this nation are dramatically expanding their investment."

—John B. Tucker

"I think those of us who are educators by profession and legislators by avocation and by commitment have long felt that the role of education, both elementary and secondary, but especially higher education has played an unusually important role in New England. It is an economic asset — in fact we believe that it is probably New England's most important single economic asset — it also of course is very important in terms of the spiritual life, the intellectual life and the cultural diversity it adds to our communities. So it not only enables us to live intelligently in terms of our economic well-being, but also adds immeasurably to the quality of our life."

—Robert J. McKenna

"The U.S. has evolved into a knowledge- and information-based society and economy in which over fifty percent of the workers in this country are now involved in knowledge and information tasks, either the collection, the organization or the dissemination of information. Higher education is responsible for producing the key components of our knowledge-based economy — graduates who enter the work force and take the jobs for today and tomorrow, research and development which is transferred to the private sector for practical and commercial application, and continuing education for training and retraining."

"Overall when you consider the knowledge economy that has emerged in the U.S., what we find is that knowledge is critical to the new economy, that colleges and universities are at the center of knowledge, and therefore colleges and universities become the critical resource, the central point for national, regional and state economic development."

—Melvin H. Bernstein

"The states that have the greatest possibility for participating in the growth of the high technology industries are those that have these industries now, that have a history of significant employment in such industries, that have a skilled workforce and that maintain and expand the continuing education options of the highest quality which employees in these fields must possess."

"Balanced growth for the state of New Hampshire is not to be confused with establishing a major industrial policy for this state; it is rather that through a body politic such as this, it ought to be possible for business and industry and government and education to begin to cooperate and to define more deliberately what the issues are, where the problems are, and how they can be addressed in a new collaborative enterprise."

—John C. Hoy

Attracting High Technology Industry

In a study done in 1982 by the Joint Economic Committee of the United States Congress, high technology companies from around the country were surveyed and asked what were the most important factors in making a decision to move to a region or to a state within a region. Labor skills and availability, labor costs, a region's tax climate, academic institutions, and cost of living were found to be the top five factors.

- New England ranked first among other regions of the country in academic institutions and cultural amenities.
- New England ranked second in its access to markets and its ease of transportation.
- New England ranked last in its tax climate and the cost and the availability of energy.

The most important factor, labor availability, is defined as the number of high school and college graduates who are available in a particular state for the workforce. New Hampshire has an impressive score in this regard. 72% of New Hampshire's workforce are high school graduates compared to the national average of 66%. As to college graduates, New Hampshire has 18% in the workforce, which again is significantly ahead of the national average of 16%.

New Hampshire's average weekly wage rate for production workers reflects the lower cost of living in New Hampshire and compares favorably with that of other New England states. New Hampshire has no income tax, sales tax or excise tax on automobiles. In 1981, New Hampshire had the lowest state and local tax burden per $1,000 of personal income in the nation.

The availability of skilled labor and the economic differences which directly influence the cost of living for an individual have contributed to attracting high technology industry.

High Technology Growth Data

High technology employment as a percent of total nonagricultural employment in top five states under three definitions, 1982 annual average.[1]

Group I		Group II		Group III	
Total, U.S.	13.4	Total, U.S.	2.8	Total, U.S.	6.2
Delaware	24.0	New Hampshire	7.2	Delaware	16.2
New Hampshire	21.0	Vermont	7.0	Connecticut	13.0
Michigan	20.4	Connecticut	6.9	New Hampshire	12.5
Connecticut	20.3	Arizona	6.8	Vermont	11.7
Vermont	18.9	California	6.2	Massachusetts	11.7

[1] 9 month average

High technology employment growth as a percentage of total nonagricultural employment growth in top five states, 1975–82, under three definitions.

Group I		Group II		Group III	
Total, U.S.	21.0	Total, U.S.	5.8	Total, U.S.	11.3
South Dakota	49.1	Massachusetts	18.3	Massachusetts	30.0
New Hampshire	43.1	New Hampshire	15.8	Vermont	26.9
Vermont	38.7	Vermont	11.5	South Dakota	25.1
Massachusetts	35.2	Arizona	10.6	New Hampshire	25.0
Nebraska	33.1	Maine	10.1	Connecticut	21.4

Definitions

Group I:	Based on utilization of technology-oriented workers.
Group II:	Based on research and development expenditures.
Group III:	Based on utilization of technology-oriented workers and research and development expenditures.

SOURCE: *Monthly Labor Review*, U.S. Department of Labor, Bureau of Labor Statistics, November 1983.

Regional Unemployment

	December 1983	December 1982
Connecticut	4.5%	7.0%
Maine	7.9	8.3
Massachusetts	5.8	7.1
New Hampshire	4.3	7.7
Rhode Island	6.8	10.0
Vermont	5.8	7.2
United States	8.0%	10.5%

SOURCE: Bureau of Labor Statistics, Regional Office, Boston.

Education Needs Signaled by Population and Industry Growth

Labor supply is a major consideration of corporations which have come to and are expanding in New Hampshire, whether they are high technology companies or general industrial organizations. Thus far labor supply and the employment needs of industry are very closely matched — as evidenced by low unemployment. As industry expands, the need for educated and skilled workers will increase. The key to continued growth will be the educational quality of the work force.

From 1970 to 1980 the population increased by 24.8%; Massachusetts, Rhode Island, Connecticut, Maine and Vermont accelerated at a far slower pace than New Hampshire. From 1980 to 1990, New Hampshire is expected to experience a 66.6% expansion in the workforce aged 30-49 and in the period 1990 to 2000, a 48% increase in the workforce aged 50-69. As in the past, much of this growth can be attributed to in-migration. In the period 1990 to 2000, New Hampshire is expected to have a higher percentage of non-native residents than any other state.

But coupled with this population growth must be an intensive education and retraining effort by the state. Over the next two decades present workers will require intensive retraining and skills upgrading as industry expands while new workers will need to be educated so that they may successfully enter this competitive workforce. The key to New Hampshire's success will be a responsive higher educational system able to keep pace with the workforce requirements of a growing and sophisticated state economy.

The access and proximity to institutions of higher education has and will play an important role in providing and maintaining a skilled labor force for the corporations which have recently moved to New Hampshire — 398 firms in the past five years. To relocate and expand, new corporations will also demand skilled workers.

Percent Change in Young, Middle and Old Segments of Working Age Population, 1970 to 2000

	Age Group		
	15–29	**30–49**	**50–69**
New Hampshire			
1970–1980	+44.0%	+39.6%	+24.2%
1980–1990	+13.5	+66.6	+19.0
1990–2000	+ 6.7	+37.3	+48.0
New England			
1970–1980	+19.9	+10.6	+ 9.4
1980–1990	− 9.6	+33.1	− 4.3
1990–2000	−15.1	+12.3	+15.1
United States			
1970–1980	+26.7	+16.4	+15.0
1980–1990	− 6.3	+35.9	− 0.3
1990–2000	− 2.5	+13.9	+16.1

SOURCE: George Masnick, "Demographics of New England: State and Region," presented at the NEBHE conference *Retraining Needs of Mid-Career Workers in New England*, December 1, 1983, John F. Kennedy Presidential Library.

Current Financing of New Hampshire's Public Higher Education

New Hampshire 1983–84 Appropriations

	Appropriations 1983–84 ($000)	2-year change
U of New Hampshire	$23,178	+ 4%
Keene State College	4,487	+ 10%
Plymouth State College	4,466	+ 16%
Merrimack Valley College	802	+ 96%
School for Lifelong Learning	364	+ 13%
Aid to Vo-Tech colleges	6,786	+ 4%
Student Aid	161	+ 33%
TOTAL	$41,141	+ 5%

1983–84 Appropriations per Capita

	Rank	State	Amount
High	1	Alaska	$340.30
Average		United States	115.29
	30	Rhode Island	102.36
	38	Connecticut	87.17
	43	Massachusetts	78.47
	44	Vermont	77.88
	49	Maine	67.48
Low	50	New Hampshire	43.35

1983–84 Appropriations per $1,000 of Personal Income

	Rank	State	Amount
High	1	Alaska	$ 20.85
Average		United States	10.45
	32	Rhode Island	9.16
	39	Vermont	7.92
	45	Maine	6.29
	46	Connecticut	6.15
	48	Massachusetts	5.38
Low	50	New Hampshire	2.93

Allocation of State and Local Tax Revenues to Public Higher Education

	FY 80		FY 81		FY 82		FY 83	
	Pct	Rank	Pct	Rank	Pct	Rank	Pct	Rank
Connecticut	7.2	43	8.4	42	7.9	44	6.8	47
Maine	6.9	46	7.5	45	7.6	47	6.9	45
Massachusetts	5.1	51	4.9	51	5.0	51	4.5	51
New Hampshire	5.1	50	5.6	50	6.2	49	5.2	50
Rhode Island	9.0	39	9.3	39	9.2	40	8.3	40
Vermont	6.6	47	7.5	44	8.0	43	7.0	44
United States	10.4		11.3		10.8		10.4	

SOURCE: National Institute of Education

Public Attitudes Toward Higher Education and Economic Development

Do you think that the application of resources of colleges and universities is important to economic growth in your state?

Region	very important	somewhat important	unimportant
New England	54.9%	36.6%	4.2%
United States	51.0	36.1	5.4

Do you think it is important that institutions of higher education in your state directly assist in retraining workers for occupational skills that will be in demand by industry?

Region	very important	somewhat important	unimportant
New England	62.0%	31.0%	2.8%
United States	57.9	34.7	4.9

A nationwide poll co-sponsored by the New England Board of Higher Education revealed that a larger majority of New Englanders as compared to all Americans believe that colleges and universities can contribute to economic growth and retraining workers for new jobs. The survey, titled "American Attitudes Toward Higher Education," was conducted by the Group Attitudes Corporation of New York City in October 1983.

Higher Education is a Growth Industry in New England

Institutions of higher education play a strong direct as well as indirect role in the region's economy. These institutions train people to meet the region's skilled labor needs of industries for engineers, MBA's, scientists, and other professionals. Furthermore, through their expenditures, educational institutions contribute substantially to the region's economic base and are collectively one of the region's largest employers. Over 10,000 people are employed in higher education in New Hampshire alone.

With 260 colleges and universities located in six states of 12 million people, New England is the most knowledge-intensive region in the country and probably in the world. The region has 50 percent more institutions of higher education per capita (and nearly twice as many private institutions per capita) than the nation as a whole. New England's financial share of total expenditures for U.S. higher education is 7.2 percent, nearly 40 percent higher than the region's 5.2 percent share of the gross national product.

Higher education institutions spend over $5 billion directly in the six state region which has a multiplier effect of approximately $12.5 billion. For New Hampshire, the state's Council of Colleges and Universities and the University of New Hampshire System report that $323 million is being spent in New Hampshire through direct college expenditures which in turn generate a more than $810 million impact on the New Hampshire economy.

Policy Recommendations for Business-Education Partnerships

New England's recent economic advances have been built largely around high technology and service sector industries, in which the region's colleges and universities have played a vital role. Cooperative planning and new collaborative arrangements among educators, government officials and business leaders can best utilize limited educational resources. There is a need to improve the capacity of colleges and universities to provide technology-oriented skill development. State tax policies should encourage private sector contributions to higher educational institutions and promote flexibility in curricula and staffing that is responsive to business needs. Moreover, financial support for higher education among the six New England states should be increased.

- Industries in the region, especially in the high-tech field, should join together to finance "work scholarship" contracts at the college and university levels.
- Cooperative arrangements should be initiated through which colleges and universities can use state-of-the-art industry equipment in "off-hours."
- Public and private colleges ought to pool common resources and eliminate curricula redundancies, as well as provide new curricula and flexible staffing patterns in response to industry needs.
- Universities and colleges should cooperatively develop the regional case for support from the private sector, including foundations and corporations.
- One-on-one relationships should be established between individual companies and individual educational institutions enabling professionals to serve as part-time faculty at local colleges.
- Colleges and universities should increase their sponsorship of contracted training and education programs for business and industry.

Sources of Educational Strength in New Hampshire

1982 SAT Performance in the New England States

	SAT Score	Rank of 22 States[1]	% of high school seniors taking test
New Hampshire	925	1.0	56.2%
Vermont	904	3.0	54.3
Connecticut	896	6.5	69.0
Maine	890	8.0	46.5
Massachusetts	888	11.5	65.6
Rhode Island	877	14.0	60.7
New England Average	897		
United States Average	893		

[1] Explanation of Rankings: In case of ties in rankings, the average rank is used. Only 22 states qualified for comparison by having a minimum of 30% of their high school seniors taking the SAT.

Chart shows that New Hampshire ranked first in 1982, as in 1972, among qualifying states in high school senior performance on the SAT. The rankings were released in January 1984 as part of a ten year comparison (1972 and 1982) of state SAT performance by the U.S. Education Department.

Model New Hampshire Program Sponsored by Corporate Council for Critical Skills

The comprehensive program of the Corporate Council for Critical Skills addresses some of the most pressing problems of schools today — critical skills and the numbers of students and teachers able to deal with real problems of the outside world in math, science, technology and communications. The summer projects day camp is a vivid illustration of an outstanding program in action.

Supported by a challenge grant from the Cabot Corporation Foundation and matching funds from New Hampshire businesses, industries, and foundations, the Corporate Council for Critical Skills seeks to entice qualified math and science teachers to stay in teaching and to change teaching methods throughout the state.

According to William Southworth, director of the council, "Critical skills are problem-solving, critical thinking, learning on your own, communication skills. Critical skills are needed in any job, not just those related to math and science."

Each classroom has one master teacher, three to four teachers-in-training, and 15 to 20 students. For the duration of the camp, the students work on solving the problems the teachers pose.

Since its inception in 1981, 51 teachers have been trained. Two-thirds of the funding is now provided by the participating school districts. The response to the program has been so enthusiastic that the Corporate Council for Critical Skills is currently planning to expand its program so that it may train greater percentages of teachers in school districts in critical skills teaching.

Interstate Cooperation
The Regional Student Program

A recent nationwide poll co-sponsored by NEBHE revealed that a clear majority of New Englanders favor greater interstate cooperation at all levels of higher education in order to reduce costs, increase academic options for students and at the same time avoid duplication of programs in adjacent states.

The Regional Student Program (RSP), in operation for 27 years, continues to be a model program of interstate cooperation which increases educational opportunities at the post-secondary level. RSP enables residents of the six New England states to enroll in out-of-state public colleges and universities at reduced tuition rates for certain undergraduate and graduate degree programs not available at their home state's public campuses.

During 1982–83, 819 residents from New Hampshire took advantage of RSP, studying such specialties as astronomy, library science, pharmacy, nuclear engineering, nutrition and dietetics, and plastics engineering. These New Hampshire students saved $1,387,200 in tuition reductions (an average saving of $1694 per student). Additionally, New Hampshire taxpayers saved millions of dollars because these specialized programs did not have to be duplicated at public campuses within the state.

In 1982–83, 677 students came to the public institutions of New Hampshire from the five sister states of New England to study. The fields that they chose for the most part were occupational therapy, hotel administration, drafting and designing techniques, hydrology and atmospheric science.

A new student exchange program recently begun — the New England/Quebec Student Exchange Program — now involves 35 New England campuses, both public and private, and shows steady growth. In New Hampshire, Colby Sawyer College, Keene State College, New Hampshire College, Notre Dame College, Plymouth State College and the University of New Hampshire are participating.

The General Public's Attitude Toward Interstate Cooperation in Academic Program Offerings

	New England		United States	
	Favor	Do Not Favor	Favor	Do Not Favor
At the Vocational or Community College Level	78.9%	16.9%	69.9%	18.3%
At the Undergraduate Level (Four Year)	78.9	15.5	68.2	19.3
At the Graduate Level (Master's & Doctoral)	81.7	12.7	72.7	15.1
At the Professional Level (Medicine, Law, Veterinary, Dental)	83.1	11.3	74.7	13.2

The findings are taken from a recent nationwide survey titled "American Attitudes Toward Higher Education," co-sponsored by NEBHE.

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Evaluation Results

In their evaluation of the program, 94 percent of those attending found the policy briefing a helpful learning experience. Legislators rated the briefing very effective in providing a significant regional perspective, increasing their understanding of the importance of higher education to the region's economic development and providing valuable information to guide future policy discussions on financing higher education. Nine out of 10 legislators recommend that similar briefings be conducted on an annual basis.

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Pamela L. Goldschmidt, *Project Coordinator, Publication Editor*
Ann M. Rossi, *Administrative Assistant*

We would like to express our appreciation to the Caucus of New England **State Legislatures** for their assistance with this project.

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NEW ENGLAND BOARD OF HIGHER EDUCATION

THE PUBLIC INVESTMENT IN HIGHER EDUCATION

A SPECIAL POLICY BRIEFING FOR RHODE ISLAND LEGISLATORS

A Regional Project
supported by
The Fund for the Improvement of
Postsecondary Education

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The New England Board of Higher Education has been awarded a three year grant from the national Fund for the Improvement of Postsecondary Education (FIPSE) for a regional economic development project focused on the public investment in higher education. Under the terms of the grant an Advisory Council comprised of legislative leaders from the six New England states has been established. A special policy briefing for legislators is planned for each New England state. The briefing reported here took place in April in Providence, Rhode Island and is the second in a series of six.

Agenda

Introduction:

Senator Robert J. McKenna, Chairman, New England Board of Higher Education; Chairman, Senate Finance Committee, Rhode Island.

Higher Education — the Critical Resource in the Information Age:

Melvin H. Bernstein, Vice President for Research and Development, New England Board of Higher Education.

The Significance of Mid-Career Training and Education to the Political Economy of Rhode Island:

John C. Hoy, President, New England Board of Higher Education.

Panel:

Senator William O'Neill, Senate President, Pro Tempore, Rhode Island.

Eleanor McMahon, Rhode Island Commissioner of Higher Education.

Representative Paul Sherlock, House Finance Committee, Rhode Island.

Discussion.

New England Board of Higher Education:
Robert J. McKenna, *Chairman*
Paul V. Sherlock, *Vice Chairman, Rhode Island*
John C. Hoy, *President*

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Richard King, *Vice President for Research Services*
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Ellin G. Anderson, *Administrative Assistant*

"New England higher education will confront severe competition from the rest of the United States for the balance of this century. I believe that the issue of positioning Rhode Island in terms of its competitive ability to attract R & D funds is a matter of significant public policy. Policy makers must assure through basic state support that Rhode Island institutions of higher education have the necessary baseline resources to effectively compete for federal, foundation and corporate research and development dollars."

—John C. Hoy
Speaker

"Education and training are critical to developing human capital and make it possible to attract and retain business in the state. Rapidly growing industries such as high technology and service fields are particularly interested in quality workforces. With the increasing emphasis on productivity, careful evaluation of the investment by the state in education and training is required. In New England, we must develop our human capital fully since it is the basis of the emergent information economy."

—Melvin H. Bernstein
Speaker

"There is a very real need to have public policy makers throughout the region fully understand the longterm importance of the investment legislators make through tax support of higher education each year."

—Robert J. McKenna
Chairman
New England Board of Higher Education

Commissioner of Higher Education
Eleanor McMahon

"We are one of the most intensive states in the nation in terms of the numbers of college students we have as related to the size of the population. We have substantial migration into the state by young people for education, but we are exporting students who would like to stay here upon graduation. We need to support research efforts within higher education institutions which can create jobs. It is of vital importance to our economic future."

—Commissioner Eleanor M. McMahon

"The quality of the elementary and secondary systems is crucial to the long term health of higher education as well as a major ingredient in the economic development of the state."

—Representative Paul V. Sherlock

"It is the obligation of the legislature to encourage people to continue their education and improve their skills and competence."

—Senate President William C. O'Neill

Importance of Retraining for the Labor Force of Rhode Island

The high-tech revolution which has already created significant new industry in New England, particularly in Massachusetts and New Hampshire, will quickly make itself felt in the operations and technical procedures of more traditional industries. Thus even a state without substantial new high-tech industry *per se* must concern itself with the retraining of its labor force to make competitive use of high-tech tools and methods as they will be applied in existing industries.

Rhode Island, like its neighbors Connecticut and Massachusetts, must concern itself with the retraining of adult workers rather than merely relying on newly trained entrants to the workforce. The three southern New England states are projected to have essentially no population growth from now to the end of the century as compared with an 8.7 percent growth nationally and a projected growth rate approaching 20 percent in northern New England. A projected pattern of decline in the number of high school graduates (Rhode Island graduates in 1999 will be 31 percent fewer than in 1981) places additional pressure on the present work force whose median age will be increasing. The current median age of the total population is 31.7 years and it is estimated that ninety percent of all people who will be working in the state in 1990 are already in the workforce.

Representative Paul Sherlock
Vice Chairman NEBHE

Projected Population Growth Rates, 1979–2000

	1970–1980	1980–1990	1990–2000
United States	11.4%	11.2%	8.7%
New England	4.2	6.4	4.4
Connecticut	2.5	1.4	−1.1
Massachusetts	0.8	2.1	0.3
Rhode Island	−0.3	2.9	−0.2
Maine	13.2	17.4	13.9
New Hampshire	24.8	24.4	28.5
Vermont	14.8	20.7	16.9

Distribution of Working Population
Percent Change in Age Groups, 1970–2000

		Age Group	
	15–29	30–49	50–69
Rhode Island			
1970–1980	+10.0	+ 1.3	+ 8.8
1980–1990	−11.2	+27.2	−10.1
1990–2000	−18.9	+ 9.2	+ 4.9
New England			
1970–1980	+19.9	+10.6	+ 9.4
1980–1990	− 9.6	+33.1	− 4.3
1990–2000	−15.1	+12.3	+15.1
United States			
1970–1980	+26.7	+16.4	+15.0
1980–1990	− 6.3	+35.9	− 0.3
1990–2000	− 2.5	+13.9	+16.1

SOURCE: George Masnick, "Demographics of New England: State and Region," presented at the NEBHE Conference *Retraining Needs of Mid-Career Workers in New England,* December 1, 1983, John F. Kennedy Library.

Decline of High School Graduates from 1981
Projected Change 1981–2000

	1986	1988	1992	1999
United States	−14%	−10%	−22%	− 5%
Connecticut	−18	−17	−39	−31
Massachusetts	−17	−18	−42	−35
Rhode Island	−21	−19	−41	−31
Maine	−16	−13	−30	−22
New Hampshire	−12	− 7	−32	−19
Vermont	−11	− 3	−22	− 5

SOURCE: *High School Graduates: Projections for the Fifty States (1982–2000)* by William R. McConnell, Norman Kaufman, Boulder, Colorado: 1984, Western Interstate Commission for Higher Education.

Education Levels of Rhode Island Residents

The demographic problems created by the declining number of high school students are compounded in Rhode Island by an increasing high school drop out rate (from 19% in 1972 to 27% in 1982) and, historically, by a lower than average high school graduation rate among its adult population, many of whom are first generation Americans. Of Rhode Islanders over the age of twenty-five, only sixty-one percent are high school graduates compared to sixty-eight percent in the nation as a whole.

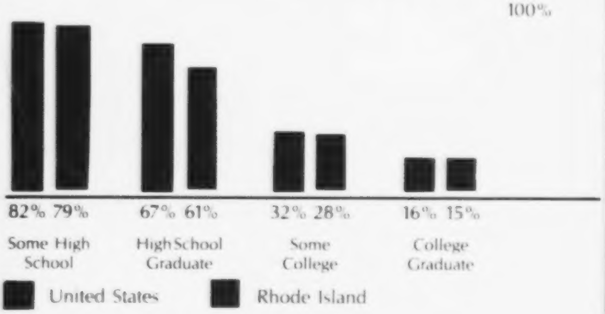
Clearly Rhode Island needs to:

- Strengthen the educational skills of its people who have not graduated from high school. Clear goals should be established to reduce the Rhode Island high school dropout rate.
- Encourage an increased percentage of those who did complete high school and some college to complete their college education. Because of the state's small size, the higher education network, both public and private, is more accessible to the people of Rhode Island than is true of any state in the country.
- Assure that those who are college graduates within the state have the opportunity to return for additional training or advanced degrees. A statewide plan should be developed to respond to the postgraduate education and training needs of the 90,000 college graduates who live within the state.

The quality of the labor force in Rhode Island depends on the availability of training and continuing education and the encouragement residents receive to further their own development.

Senate President William O'Neill

The Public's Education Level



SOURCE: U.S. Census Bureau, 1980 Census.

Percentage of Students Graduating from High School

State and Year		Percent	National Rank	New England Rank
Connecticut	1982	71.2	37	6
	1972	83.4	12	1
Maine	1982	72.1	34	5
	1972	80.9	18	3
Massachusetts	1982	75.9	23	3
	1972	77.9	30	5
New Hampshire	1982	78.3	13	1
	1972	80.7	19	4
Rhode Island	1982	72.9	31	4
	1972	81.1	16	2
Vermont	1982	77.7	16	2
	1972	70.9	41	6
U.S. Average	1982	72.8		
	1972	77.2		

SOURCE: U.S. Department of Education.

Years of School Completed by New England Adults 25 Years and Older, 1980 Census

	High School Graduate	College Graduate
Connecticut	70.3%	20.7%
Maine	68.7	14.4
Massachusetts	72.2	20.0
New Hampshire	72.3	18.2
Rhode Island	61.1	15.4
Vermont	71.0	19.0
U.S. Average	67	16

SOURCE: U.S. Census Bureau.

The Economic Impact of Higher Education in Rhode Island

Rhode Island's 12 institutions of higher education are clearly a major industry in the state. They employ 14,000 people, making higher education the second largest industry in terms of employment. Almost 70,000 students are enrolled in colleges and universities. About 40,000 are residents of Rhode Island and 30,000 are out-of-state students.

Colleges and universities bring major sources of revenue to the communities in which they are located and to the state of Rhode Island. In 1982–83, direct expenditures by colleges were almost $474 million which in turn generated a more than $1.185 billion impact on the Rhode Island economy.

At least eight companies have been formed in Rhode Island in the past several years as spin-offs from university or hospital research. In addition to these new companies, university-business collaborations serve as a channel for technology transfer to many Rhode Island industries. Through the University of Rhode Island's Electrical Engineering Program alone, 33 companies are participating in joint projects.

Federal Support to New England Higher Education

Public funds become an investment in economic development of the state when used to support research in colleges and universities. Jobs are both created and maintained when innovative technologies are applied to new and mature industries.

New England's 260 colleges and universities represent 7.7 percent of the 3,280 higher education institutions in the United States. However, the six state region receives as much as 9.7 percent of total federal funds awarded to universities and colleges in the United States and it receives 11.6 percent of these federal funds specifically for research and development.

Rhode Island with 7.7 percent of New England's population and 8.8 percent of regional enrollment receives only 5.9 percent of total federal funds granted to higher education in the six states. Two of Rhode Island's institutions of higher education, Brown University and the University of Rhode Island are ranked among the top ten in New England awarded federal funds.

Distribution of Federal Funds Compared to State Population and Enrollment

	Percent of Population	Percent of Enrollment	Percent of Federal Funds
Connecticut	25.2%	21.0%	17.2%
Maine	9.0	6.2	3.2
Massachusetts	46.3	53.0	64.8
New Hampshire	7.7	6.8	4.3
Rhode Island	7.7	8.8	5.9
Vermont	4.1	3.2	3.6

SOURCES: National Center for Educational Statistics, National Science Foundation and U.S. Census Bureau.

The Top 10 New England Institutions Awarded Federal Funds for Fiscal 1982

Institution	Research and Development	National Rank	Total Federal	National Rank
MIT	$ 148,837,000	2	$164,182,000	3
Harvard	85,757,000	8	104,442,000	10
Yale University	78,920,000	12	97,750,000	15
Woods Hole Oceanographic Inst.	32,877,000	44	34,168,000	59
Boston University	30,397,000	46	44,481,000	43
University of Connecticut	24,972,000	54	34,968,000	57
Univ. of Mass/Amherst	18,034,000	72	21,913,000	92
Brown University	18,031,000	73	22,794,000	88
Tufts	16,808,000	77	36,710,000	54
University of Rhode Island	13,996,000	89	21,081,000	97
Total U.S. Institutions	$4,552,543,000			

SOURCE: National Science Foundation.

Model Programs
University Research Applications to Industry

At the University of Rhode Island (URI), over $3 million in combined support is applied to a wide range of research activities. The College of Pharmacy ranks in the top 10% nationally and accounts for about $750,000 in research expenditures. The College of Business Administration at the University of Rhode Island has received national recognition for its development of a computer-based analysis system for small business. Since its start in 1978, the system has been used to review and reduce the risk of failure for more than 300 business plans.

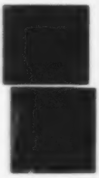
The URI Robotics Center concentrates its research on vision and sensory-based robots which are expected to be the high growth areas in robotics applications. The Robotics Center currently has several patents and license agreements which are generating revenues. In 1980 the robotics group initiated an Industrial Participation Program to facilitate technology transfer to 26 companies, each paying $25,000 per year for three years to gain access to University research. URI has established itself as a successful industry/university research center in robotics.

Cooperative research efforts among investigators at URI, Brown University, and affiliated hospitals include the synthesis and characterization of new types of anti-cancer drugs, other new treatments for cancer, new cancer screening techniques, advanced monoclonal antibody production and applications for recombinant DNA technology.

At Brown University, the Laboratory for Engineering Man/Machine systems (LEMS), founded in 1980, supports research programs in computer vision, image processing, speech processing, signal processing, computer graphics and computer aided design. The Laboratory also sponsors a series of seminar programs by eminent scientists and engineers in related fields and has actively pursued the creation of cooperative research programs with the private sector.

During the last five years, Brown University has doubled its research expenditures to over $20 million.

The General Public's Feelings About the Cost of a College Education



	Agree	Disagree
College costs are rising at a rate which will put college out of the reach of the average person in the foreseeable future.	81.7%	16.9%
I would be able to afford college tuition at this time only with low-interest loans or grants.	74.6%	23.9%

The findings are taken from a recent nationwide survey titled "American Attitudes Toward Higher Education," co-sponsored by NEBHE.

Source of Educational Strength in Rhode Island

Financial aid provides many individuals the opportunity to pursue higher education. A 1983 poll conducted by the Group Attitudes Corporation of New York and co-sponsored by NEBHE indicated that New Englanders are extremely concerned about the rising costs associated with higher education. Four out of every five persons are convinced that college costs are climbing at such a rate that college will be out of the reach of the average person in the foreseeable future. Just over 7 out of every 10 New Englanders—74.6%—said they would be able to afford college tuition at this time only with the assistance of loans or grants.

Rhode Island ranks high in New England and the nation in the dollar value of state scholarships and grants awarded per capita—a significant regional and national achievement. The total amount of grants awarded in 1983-84 was $7.6 million. During the 1984-85 year total awards are expected to exceed $8.2 million. Students received over $700,000 through work opportunity funds alone. Without this assistance, the costs of higher education would prove prohibitive to many individuals who require education and training.

Interstate Cooperation
The Regional Student Program

The 1983 poll by the Group Attitudes Corporation and NEBHE also revealed that a clear majority of New Englanders favor greater interstate cooperation at all levels of higher education in order to reduce costs, increase academic options for students and at the same time avoid duplication of programs in adjacent states.

NEBHE's Regional Student Program (RSP), in operation for 27 years, continues to be a model program of interstate cooperation which increases educational opportunities at the post-secondary level. RSP enables residents of the six New England states to enroll in out-of-state public colleges and universities in the region at reduced tuition rates for degree programs not available at their home state's campuses.

During 1983–84, 579 residents from Rhode Island took advantage of RSP in the five neighboring New England states, studying such specialties as forestry, meteorology, occupational therapy, law, textile technology, and hotel, restaurant and travel administration. These Rhode Island students saved $1,100,937 in tuition reductions (an average saving of $1901 per student). Additionally, Rhode Island taxpayers saved millions of dollars because these specialized programs did not have to be duplicated at public campuses within the state.

Rhode Island was the largest net importer in the RSP during 1983–84, with 1,138 students entering the state to study such specialties as pharmacy, ocean engineering, biomedical electronics engineering, oceanography, marine affairs, dental hygiene and library science.

The New England/Quebec Student Exchange Program, initiated in 1981, now involves 35 New England campuses, both public and private, and shows steady growth. In Rhode Island, Bryant College, Providence College, Rhode Island College, Salve Regina–Newport College and the University of Rhode Island are participating.

The General Public's Attitude Toward Interstate Cooperation in Academic Program Offerings

	New England		United States	
	Favor	Do Not Favor	Favor	Do Not Favor
At the Vocational or Community College Level	78.9%	16.9%	69.9%	18.3%
At the Undergraduate Level (Four Year)	78.9	15.5	68.2	19.3
At the Graduate Level (Master's & Doctoral)	81.7	12.7	72.7	15.1
At the Professional Level (Medicine, Law, Veterinary, Dental)	83.1	11.3	74.7	13.2

The findings are taken from a recent nationwide survey titled "American Attitudes Toward Higher Education," co-sponsored by NEBHE.

Attendees

Nancy Abood
Legislative Liaison
Community College of Rhode Island

Beth Arruda
Research Analyst
Rhode Island Treasury Department

William Baird
Legislative Liaison
Rhode Island College

Kathy Bello
House Fiscal Staff

Roger N. Begin
Representative

Nancy Borden
Representative

Dennis Bouchard
Director of Economic Development
State of Rhode Island

Christopher Boyle
Representative

Stephan Burns
Rhode Island Board of Governors of
Higher Education

Augustine Capotosto, Jr.
Rhode Island Board of Governors of
Higher Education

David R. Carlin, Jr.
Senator

Albert E. Carlotti
Chairman
Rhode Island Board of Governors of
Higher Education

Joseph L. Casinelli
Representative

Elizabeth M. Cesario
Senator

Lloyd E. Cook, Sr.
Representative

W. Crowley
Representative

James S. D'Ambra
Senator

Ralph S. Daniels
Leglislative and Community Relations
Specialist
Office of Higher Education

Joseph D'Angelis
Representative
House Majority Leader

Anthony DeLuca
Representative

Stephen R. Deutsch
Senator

J. Troy Earhart
Commissioner of Elementary and
Secondary Education

Edward D. Eddy
President
University of Rhode Island

Theodore S. Edington
Senator

Jerome P. Egan
Representative

Raymond W. Fogarty
Representative

Michael Flynn
Senator

Leo J. Gannon
Senator

Jane B. Gencarelli
Senator

Bradford Gorham
Representative
House Minority Leader

John B. Harwood
Representative

Suzanne M. Henseler
Representative

Thomas M. Heskin
Representative

Donald R. Hickey
Senator

Senator McKenna and Albert Carlotti, Chairman of the Rhode Island Board of Governors for Higher Education

James C. Hovey
Senator

William V. Irons
Senator

Fran Jones
Director of Planning and Research
Rhode Island School of Design

Sherwin J. Kapstein
Representative

Louise T. Kazanjian
Rhode Island Board of Governors of
Higher Education

Thomas A. Lamb
Representative

Beth Langall
Senate Majority Leader's Office

Anthony R. Leone
Legislative Liaison
University of Rhode Island

Irving H. Levin
Representative

Edward Liston
President
Community College of Rhode Island

John Madigan
Executive Director
Rhode Island Higher Education
Assistance Authority

Maureen E. Maigret
Representative

Helena McDermott
Representative

Robert J. McKenna
Senator

Eleanor McMahon
Commissioner
Office of Higher Education

Theresa J. Melvin
Representative

Richard Mumford
Asst. Commissioner for Financing and
Management
Office of Higher Education

Blanche R. Murray
Rhode Island Board of Governors of
Higher Education

Helen I. Nichols
Representative

Mildred T. Nichols
Rhode Island Occupational
Information Coordinating
Committee

William T. O'Hara
President
Bryant College

William C. O'Neill
Senator
President Pro Tempore

Gaetano D. Parella
Representative

Richard R. Patterson
Senator

Roger L. Pearson
Representative

Dennis Quinn
Senator

William Rizini
President
Roger Williams College

Albert J. Russo
Senator

Antonio SaoBento, Jr.
Representative

Francis H. Sherman
Representative

Paul V. Sherlock
Representative

John M. Skeffington, Jr.
Representative

Bonnie Stewart
Senator

Paul A. Suttell
Representative

Cynthia Ward
Asst. Commissioner for Programs and
Planning
Office of Higher Education

Joan R. Wiesner
Senator

From an editorial in the *Providence Journal and Evening Bulletin*, April 23, 1984, following the Rhode Island legislative briefing:

The New England Board of Higher Education has challenged the state to go even further than the educational goals established by the Greenhouse Compact.

Recommended programs under the compact include the encouragement of business support for colleges and universities, creation of a state Academy of Sciences and Engineering with an affiliated research institute to serve industry's needs, customized job training, continuing education for employees and a series of pilot programs of special counseling and remedial work for the disadvantaged.

The New England Board of Higher Education last week challenged the state to go even further than that. John C. Hoy, board president, urged the state to adopt a set of goals to parallel the Greenhouse Compact. His challenge should be accepted—by the State Department of Education, school committees, administrators, teachers and their unions and every parent and student who places high value on education.

Mr. Hoy would like to see the dropout rate cut from 27 percent to 20 percent by the next decade with the rate at a "minimally tolerable rate" by the turn of the century. He called for an increase in the percentage of college graduates in the population from the present 15.4 percent to 20 percent in 1990 and 25 percent in 2000. And he recommended a high school equivalency program for the 225,000 Rhode Islanders who have never received diplomas.

As the Strategic Development Commission said, "We cannot allow our desire to enhance the technical education to cause us to narrow our commitment to broadly educating our youth." Both are crucial to the future of Rhode Island and its economic climate. The board's challenge should be met.

NEW ENGLAND BOARD OF HIGHER EDUCATION

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NEW ENGLAND BOARD OF HIGHER EDUCATION

THE PUBLIC INVESTMENT IN HIGHER EDUCATION

Report of
A Policy Briefing
for Legislators from

VERMONT

Senator William Doyle of Montpelier

A New England Project
Supported by
The Fund for the Improvement of
Postsecondary Education

Agenda

Policy Briefing for Vermont Legislators
Thursday, February 28, 1985
The State House
Montpelier, Vermont

Welcome

Senator Peter Welch
Senate President Pro Tempore

"Maximizing the Higher Education Resource in Vermont"

Melvin H. Bernstein
Project Director
New England Board of Higher Education

"Educational Attainment and Investment in Vermont"

John C. Hoy, President
New England Board of Higher Education

Discussion

Moderator

Sister Janice Ryan, President
Trinity College
Delegate to the New England Board of
Higher Education

Panel

Lattie F. Coor, President
University of Vermont
Delegate to the New England Board of
Higher Education

Hilton Wick, Acting Chancellor
Vermont State Colleges
Delegate to the New England Board of
Higher Education

Senator George Little
Member, Committees on Appropriations,
Natural Resources and Energy

The Public Investment in Higher Education

The following is a report of a special policy briefing held by the New England Board of Higher Education (NEBHE) in February, 1985 for Vermont state legislators. The briefing is part of a NEBHE regional economic development project on the public investment in higher education in New England, funded in part by the national Fund for the Improvement of Postsecondary Education (FIPSE). To guide this project, NEBHE has established a Legislative Advisory Council of leaders from the six New England states. A special policy briefing for legislators has been planned for each New England state. The briefing reported here is the fourth in a series of six. Briefings were held in New Hampshire in November 1983, in Rhode Island in April 1984, and in Massachusetts in November 1984.

New Vermont delegates to NEBHE, Florence Robillard (second from left) and Donald Chioffi (second from right) join Vermont NEBHE delegates Lattie Coor (left), president of the University of Vermont, and Sister Janice Ryan (right) president of Trinity College, Vermont, to meet with Vermont Governor Madeleine Kunin (center).

"Today the educational attainment of the populace of any given state is the clearest measure, not only of its health as a society, but of the state's capacity to sustain a successful economy."

John C. Hoy, President
New England Board of Higher Education

Higher Education: New England's Natural Resource

Higher education in New England should be viewed as a unique natural resource. New England is more successful in attracting new college students to the region than any other section of the nation, primarily because of the excellence of its public and private colleges and universities. With 260 institutions of higher learning located in six states with a population of 12 million people, New England is the most knowledge intensive region in the country and probably in the world. The region has 50 percent more institutions of higher education per capita (and nearly twice as many private institutions per capita) than the nation as a whole. Higher education contributes substantially to the region's economy, in terms of direct expenditures and the educational and research benefits provided to meet the region's economic growth and development. In a recent NEBHE survey 86% of New England's legislators agreed that higher education is a major industry in the region.

Communication Between Higher Education and Legislatures

Question: Do you agree with the view that there is enough communication between New England's higher education institutions and the region's legislators on how they can help each other?

	YES	NO
Connecticut	22.4%	77.6%
Maine	20.2%	79.8%
Massachusetts	22.0%	78.0%
New Hampshire	20.7%	79.3%
Rhode Island	15.0%	85.0%
Vermont	41.0%	59.0%
Total	23.6%	76.4%

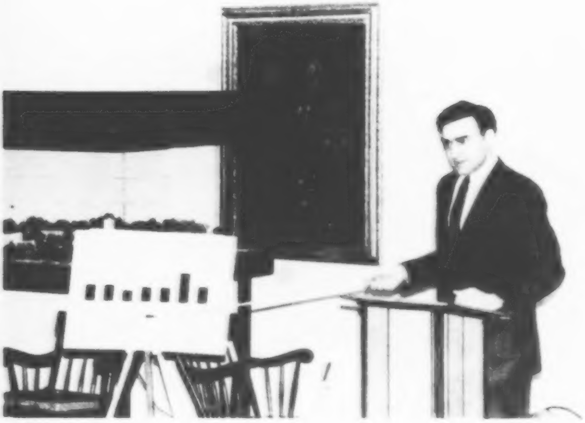
Findings taken from "Renewing Excellence: The 1984 New England Legislative Survey", sponsored by The New England Board of Higher Education

Vermont's Investment in Higher Education

Vermont has a considerable stake in the future of its institutions of higher learning. In fact, it can be said that higher education is more important to the economy of Vermont than it is to any other state in the country. Higher education can be considered one of Vermont's major industries.

"All of us in political life in the state of Vermont who have a concern about our economy and our communities recognize the essential importance of education; it is the linchpin of Vermont economic development. Without adequate education, you do not have people who are capable of doing the work that needs to be done, with the skills which allow them to obtain good jobs. Without an excellent higher education system, Vermont would be unable to attract the kind of industries that require and are dependent upon technological innovation."

Senator Peter Welch
Senate President Pro Tempore



"When you consider the state's resources, the amount of money invested, and what has been accomplished, it is fair to say that no state in the union gets a greater return from public investment in higher education than does the state of Vermont. Higher education's share of the gross state domestic product in Vermont is approximately 50 percent higher than the share of higher education in the rest of New England, and is again nearly double higher education's share in the economy of the United States overall."

Melvin H. Bernstein, Project Director
New England Board of Higher Education

Economic Impact of Higher Education

- The economic impact of Vermont higher education overall was estimated at nearly $500 million in 1982. This source of income is not only important to the quality of higher education in the state, but also to the quality of life available to Vermonters.
- The 23 degree-granting institutions in Vermont have a major impact on the state's economy. Half of the full-time student enrollment and 60 percent of the higher education tuition income is generated by out-of-state students.
- Vermont ranks fifth in the United States in government contracts and grants per faculty member; it ranks fifth in the country in instruction expenditures per student and it ranks 13th of the fifty states in research expenditures per faculty member. This investment in both research and teaching creates a dimension that should be extremely attractive to business and industry, particularly in the high technology field where a premium is placed on the availability of a well-trained labor force and innovative research and development capability.

John Hoy (NEBHE President) and Senator Little

"If you look at higher education as an industry, you realize how important the out-of-state students are, not only in maintaining the size of Vermont institutions, but in providing the revenue base needed to sustain our continued development."

Senator George Little

Government Grants and Contracts Per Faculty Member, Public Institutions New England States FY 1982

State	Dollar Amount	National Rank
Connecticut	$14,971	43
Maine	$20,817	20
Massachusetts	$11,794	50
New Hampshire	$19,183	26
Rhode Island	$24,279	15
Vermont	$35,058	5
U.S. Average	$20,472	

*District of Columbia included in ranking

Instruction Expenditures Per FTE Student, Public Institutions New England States FY 1982

State	Dollar Amount	National Rank
Connecticut	$1,882	49
Maine	$1,888	48
Massachusetts	$1,646	51
New Hampshire	$1,918	47
Rhode Island	$2,203	38
Vermont	$3,031	5
U.S. Average	$2,410	

*District of Columbia included in ranking

Research Expenditures Per Faculty Member, Public Institutions New England States FY 1982

State	Dollar Amount	National Rank
Connecticut	$10,931	42
Maine	$12,085	39
Massachusetts	$ 6,331	50
New Hampshire	$22,923	9
Rhode Island	$17,171	23
Vermont	$20,912	13
U.S. Average	$16,192	

*District of Columbia included in ranking

Source: "Higher Education Financing in the Fifty States", National Institute of Education and the National Center for Higher Education Management Systems, November 1984

Training the Workforce for Future Growth

The quality of the labor force in Vermont depends on the availability of training and continuing education programs for residents in response to industry's demands for new skills. Economic development is contingent upon an educated workforce. It is ultimately to Vermont's advantage that it concentrate on training or retraining its native workforce rather than looking to an in-migrating population to fill jobs requiring sophisticated skills.

Ronald Iverson and Lt. Gov. Peter Smith

High Technology Employment as a Percent of Total Nonagricultural Employment

	1983	National Rank
Connecticut	12.2	2
Massachusetts	11.5	3
New Hampshire	11.1	4
Vermont	9.6	7
Rhode Island	4.2	32
Maine	3.0	43
U.S. Average	6.3	

Source: *Monthly Labor Review,* U.S. Department of Labor, Bureau of Labor Statistics, May 1985

In the state of Vermont there are approximately 300,000 adults aged 25 years or older. Of this number, 90,000 did not graduate from high school. The opportunity and encouragement to continue their education is extremely important to adults who did not complete high school and to the economy of Vermont. Without sufficient education and training, the under-educated adult's ability to earn a living decreases as the momentum of the technology revolution increases, especially in the New England region, which has the nation's highest rate of job creation in the high technology field.

Years of School Completed by New England Adults 25 Years and Older, 1980 Census

	High School Graduate	College Graduate
Connecticut	70.3%	20.7%
Maine	68.7%	14.4%
Massachusetts	72.2%	20.0%
New Hampshire	72.3%	18.2%
Rhode Island	61.1%	15.4%
Vermont	71.0%	19.0%
U.S. Average	67.0%	16.0%

Source: U.S. Census Bureau

"The time has come for a state policy that will encourage greater numbers of adults to return and complete their degrees part-time. Forty-two percent of the enrollment in American higher education now comprises adult part-time learners. In Vermont, however, that figure is only 27 percent. The requirements of adults deserve increased attention from educators and state policy-makers alike."

John C. Hoy, President
New England Board of Higher Education

Vermont Places High Priority on Financial Assistance

Vermont's financing of higher education represents a high tuition/high financial assistance approach unique to the state. Tuition rates at Vermont public institutions are close to the highest in the country for both in-state and out-of-state students. However, the state, through the Vermont Student Assistance Corporation (VSAC), has made a substantial commitment to provide high impact financial assistance programs to students through the availability of grants and loan funds. In addition, the VSAC provides extensive information and counseling services, and administers an Outreach Program which serves economically and/or culturally disadvantaged high school students and adults.

Hilton Wick—Vermont business leader and higher education advocate

"Higher education makes an important and lasting impact on Vermont's economy, but we do not want to overlook the social and cultural contributions made by our institutions to the people of our state."

Hilton Wick, Acting Chancellor
Vermont State Colleges

While Vermont supports its public institutions at a level well below many other states in the country, the state fully recognizes its responsibility to provide those students in need the financial assistance to pursue higher learning.

- Vermont ranked 47th among the 50 states in FY 1985 in higher education appropriations per capita of state population.
- Vermont ranked first among the 50 states in FY 1982 in the percentage of its state higher education appropriations devoted to student financial aid. The state ranked second in the amount of state student aid dollars awarded per capita of state population. In both of these measures Vermont has ranked first or second over the past ten years.
- More than 8,000 full- and part-time Vermont students received Incentive Grants in FY 1984 from the Vermont Student Assistance Corporation to supplement federal and institution awards.
- In FY 1984, the Outreach Program administered by the Vermont Student Assistance Corporation served 5,288 Vermonters who because of their financial or social circumstances would otherwise be unlikely to continue their education past the high school level.
- Vermont ranked 41st in the percentage increase of its higher education appropriations over the past ten years and 27th in the percentage increase over FY 1983.

Factors in State Support of Public Higher Education, 1983–84

State	Appropriations per student (in dollars)	National Rank	Tuition per student (in dollars)	National Rank
Connecticut	3,972	13	519	50
Maine	3,086	46	1,609	7
Massachusetts	3,948	15	810	38
New Hampshire	1,925	51	2,576	2
Rhode Island	3,636	31	1,579	10
Vermont	2,450	50	3,520	1

*District of Columbia included in ranking

Source: "How States Compare in Financial Support of Public Higher Education 1983–84," National Institute of Education.

Interstate Cooperation: The Regional Student Program

A regional poll co-sponsored by NEBHE revealed that a clear majority of New Englanders favor greater interstate cooperation at all levels of higher education in order to reduce costs, increase academic options for students and at the same time avoid duplication of programs in adjacent states.

NEBHE's Regional Student Program (RSP), in operation for 28 years, continues to be a model program of interstate cooperation which increases educational opportunities at the postsecondary level. It enables residents of the six New England states to enroll in out-of-state public colleges and universities within the six-state region at reduced tuition rates for degree programs not available at their home states' campuses. The program is the largest of its kind in the United States.

"Higher education institutions must cooperate more with each other to provide students with better services, especially in rural areas. We have to give up some of the turf lines among various institutions and the traditional notion of who does what where in order that students' needs are well-served."

Governor Madeleine Kunin

With 348 in-migrating and 535 out-migrating students, Vermont remained a net exporter of RSP students in 1983–84. The in-migrating RSP population increased by 11 percent, with those students taking advantage of 51 percent of the programs available to them in the Green Mountain state. Out-migration rose 12 percent since 1982–83, with Vermonters enrolled in slightly under 30 percent of available out-of-state programs. Residents saved an average of $2,012 in tuition under the program. Estimated total Vermont savings rose 10 percent in 1983–84, to $1,076,319.

Half of Vermont's outgoing RSP students enrolled in New Hampshire's two-year vocational colleges and institutes and various community colleges in Massachusetts. The doctoral degree program in Education at the University of Massachusetts at Amherst enrolled the largest number of Vermont residents at the university level. Meteorology at Lyndon State College remains the most popular state college program offered through the RSP, and attracted close to 18 percent of the total in-migrating population.

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July 1985

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RENEWING EXCELLENCE

The 1984 New England Legislative Survey

A regional project supported by the Fund for the Improvement of Postsecondary Education

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RENEWING EXCELLENCE

The 1984 New England Legislative Survey

A cooperative project of the New England Board of Higher Education, the Caucus of New England State Legislatures and the National Conference of State Legislatures

November 1984

1984 NEW ENGLAND LEGISLATIVE SURVEY

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FOREWORD

How do state legislators view higher education in New England? The results of the 1984 NEBHE Survey of New England State Legislators, conducted with the support and collaboration of the Fund for the Improvement of Postsecondary Education, the National Conference of State Legislatures and the Caucus of New England State Legislatures, reveal their priorities in a number of important respects.

Over half of New England's 1323 state legislators responded. The respondents are almost unanimous, nine out of ten, in citing the quality of higher education in the region and in pointing out its importance to the economy (98 percent). They favor a variety of tax incentives, supports and exemptions, all designed to aid higher education, and they also tend to favor support of private higher education through state scholarships and research grants—a point of greater issue in the past. Ninety-three percent of legislators believe that higher education can and should play a major role in helping to retrain New England's labor force for its ongoing revolution in high technology and its anticipated applications. They seem confident that such retraining can be coordinated at the regional level.

With each question the survey clearly uncovers legislative willingness to seek improved modes of support for higher education at the community, corporate and state house levels with particular emphasis on incentives for collaboration in behalf of the higher education enterprise that will produce the kind of skilled graduates or research applications beneficial to economic development.

The survey results make clear that much better communication needs to take place among leaders in government, industry and education (only 24 percent believe there is enough communication). According to nine of every ten respondents, higher education needs to do a better job of explaining its programs to legislators and provide them with improved information on institutional effectiveness.

The overriding tone throughout the report is one of legislative good will and respect towards our colleges and universities and their future significance. It is well that this strong positive mood exists, for New England is about to undergo a severe challenge in the retraining and re-educating of its adult workforce in the face of increasing demands by industry for new skills and capabilities, and in the face of a rapid decline in the number of high school graduates each year from now to the end of the century. Business, of course, plays the primary role in providing training and retraining for jobs. State government has the responsibility to define the public policy interest and acts as a catalyst in behalf of citizens. The job retraining role ought to be among the concerns of the modern university, as pointed out by President Clark Kerr of the University of California in his famous 1963

Godkin Lectures at Harvard when he said the modern university created in the 1870's emphasized research and "occupational training." This is decidedly not to suggest that all undergraduate programs should be occupational in nature. Our graduate research training, the source of much of our technological innovation, is itself built on rigorous undergraduate education in the liberal arts and sciences.

Nevertheless, public sentiment nationally and in New England clearly is calling for fulfillment in the 1980's of the promise of a modern multipurpose system of higher education. Continuing education programs, because of their flexibility and adaptability, offer great potential for development of job retraining courses. But retraining programs must also be rigorous. The appropriate questions to be resolved by higher education, government and business will increasingly focus on the quality of retraining offered, and for whom, and at what cost; not whether the priority itself is appropriate. The realities of demography and technological competition demand a creative response at all levels of higher education, and require the close collaboration with industry and government that state legislators seem fully prepared to offer.

In 1982, Senator Robert J. McKenna, Chairman of the New England Board of Higher Education wrote in his foreword to *Financing Higher Education: The Public Investment* (NEBHE): "What we must now do is emphasize that higher education is not only good in itself, but also that, either in the short run or, more importantly, in the long run, investment in higher education must result in substantial augmentation of the economic base of a particular state and of the New England region. My own impression is that the value of the investment in higher education has not been fully understood intellectually and certainly not in terms of the emotion-laden response of legislators and governors when the chips are down and they must cope with a shortfall in taxes or an excess in expenditures in the state budget." In reviewing the 1984 survey results, Senator McKenna commented, "I am very encouraged by the evidence of progress since 1982. The climate for public investment in higher education has improved markedly and rapidly throughout New England."

We are deeply gratified by the cooperation 705 legislators throughout New England provided in responding to this effort, and believe the results are indicative of an emerging period of collaboration based upon the attitudes revealed by the survey and the public policy options thereby suggested.

John C. Hoy
President
New England Board of Higher Education

Boston, Massachusetts
October 1984

EXECUTIVE SUMMARY

NEBHE's 1984 Survey of New England State Legislators provides insight into their attitudes and concerns regarding several key issues in higher education. The survey addresses five major topics in higher education: (1) quality; (2) role in economic development; (3) finance; (4) communication between educators and legislators, and (5) role in retraining mid-career workers. A similar study of New England leadership was done by NEBHE in 1980 including college and university presidents, corporate executives, legislative leaders and the region's six governors.

Highlights

- Legislators score 98 percent in believing that higher education is vital to New England's economy, virtually identical to the high score recorded by the region's leadership overall in 1980.
- Three-quarters of legislators favor increased state funding for colleges and universities and an even larger number, nine out of ten, support tax incentives for industry to contribute to higher education.
- Nearly nine out of ten legislators support High-Technology Morrill Act legislation in their own states.
- Nine of ten legislators are impressed with the quality of New England's higher education, considerably higher than the two-thirds who think well of the quality of higher education overall in the United States.
- Communication between legislators and educators has improved since 1980 but still falls far short of the mark.
- Nine of ten legislators want academia to furnish better data to government than it has been getting.
- Legislators recognize the need for retraining of workers with obsolete skills and nine of ten believe institutions of higher education have an important role to play in retraining for high demand occupations.

Summary Analysis

I. Quality of Higher Education

Summary: Legislators hold the quality of higher education in New England in high regard. Ninety percent of the respondents believe the quality of higher education in New England is excellent or good, and very few feel it is fair or poor. By comparison, only two-thirds think the overall quality of higher education in the United States is excellent or good and 30 percent rated it fair.

Responses:

Question: What is your personal impression of the overall quality of a college or university education *in New England?*

	Excellent	Good	Fair	Poor	Don't Know
CT (N = 117)	24.8%	61.5%	11.1%	—	2.6%
MA (N = 103)	35.9%	56.3%	6.8%	—	1.0%
RI (N = 82)	35.4%	58.5%	4.9%	—	1.2%
ME (N = 103)	38.5%	54.4%	5.8%	1.0%	—
NH (N = 173)	42.2%	49.1%	6.4%	—	2.3%
VT (N = 108)	27.8%	60.2%	11.1%	—	.9%
Totals (N = 686)	34.7%	56.0%	7.7%	.1%	1.5%

Question: What is your personal impression of the overall quality of a college or university education *in the U.S.?*

	Excellent	Good	Fair	Poor	Don't Know
CT (N = 119)	7.6%	51.3%	36.1%	—	5.0%
MA (N = 102)	10.7%	57.3%	30.1%	1.0%	1.0%
RI (N = 83)	15.7%	57.8%	24.1%	—	2.4%
ME (N = 104)	10.6%	54.8%	30.8%	—	3.8%
NH (N = 173)	15.6%	47.4%	30.1%	2.9%	4.0%
VT (N = 108)	9.3%	59.3%	26.9%	1.9%	2.8%
Totals (N = 690)	11.7%	53.8%	30.0%	1.2%	3.3%

II. Role of Higher Education In Economic Development

Summary: Legislators are nearly unanimous in believing that higher education is either very important or fairly important to the New England economy. These opinions held by legislators reflect the views of the general public in New England as well as in other regions of the country. A 1983 poll of the general public co-sponsored by NEBHE and conducted by the Group Attitudes Corporation of New York City indicated that 91 percent of New England residents and 87 percent of the U.S. population as a whole feel it is important that the resources of colleges and universities be applied to economic growth in their state. Eighty-six percent of legislators view higher education as an industry in the region's economy, ahead of the 80 percent of regional leaders who held that view in NEBHE's 1980 leadership survey.

Responses:

Question: How important do you think New England's institutions of higher learning are to the economy of the region?

	Very Important	Fairly Important	Not too Important	Not Important at all	Don't Know
CT (N = 120)	65.8%	30.0%	3.3%	—	.8%
MA (N = 103)	85.4%	14.6%	—	—	—
RI (N = 82)	75.6%	20.7%	2.4%	—	1.2%
ME (N = 105)	78.1%	20.0%	1.9%	—	—
NH (N = 178)	87.1%	11.8%	1.1%	—	—
VT (N = 109)	86.2%	11.9%	1.8%	—	—
Totals (N = 697)	80.3%	17.6%	1.7%	—	.3%

Question: Some people think of New England's higher educational institutions as an industry in the region's economy. Do you agree with this view?

	Yes	No
CT (N = 115)	75.7%	24.3%
MA (N = 101)	92.1%	7.9%
RI (N = 81)	82.7%	17.3%
ME (N = 102)	87.3%	12.7%
NH (N = 138)	83.1%	16.9%
VT (N = 109)	93.6%	6.4%
Totals (N = 674)	85.5%	14.5%

III. Financing Higher Education

Summary: A large majority of legislators support increased state funding for colleges and universities and overwhelmingly favor tax incentives for industry to help education. On balance legislators favor support for private institutions through tax incentives, scholarship programs and financial aid for scientific and technological research. In addition, 87 percent favor a state level "High Technology Morrill Act" to provide matching grants for business and educational partnerships to strengthen science, engineering and technology in colleges and universities. A majority believe university land should be exempt from property taxes and that local communities as a result should be reimbursed by the state for part of the tax revenue they lose.

Responses:

Question: If someone suggested increasing state funding for colleges and universities, what would be your response to the suggestion?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 120)	28.3%	45.0%	15.0%	5.0%	6.7%
MA (N = 100)	29.0%	53.0%	11.0%	4.0%	3.0%
RI (N = 78)	34.6%	42.3%	15.4%	1.3%	6.4%
ME (N = 104)	28.8%	52.9%	9.6%	2.9%	5.8%
NH (N = 175)	44.6%	30.3%	13.1%	4.6%	7.4%
VT (N = 107)	13.1%	52.3%	20.6%	7.5%	6.5%
Totals (N = 684)	31.0%	44.4%	14.0%	4.4%	6.1%

Question: Do you support special tax incentives to encourage corporate contributions to educational institutions (e.g., equipment, personnel and facilities)?

	Yes	No
CT (N = 117)	89.4%	10.6%
MA (N = 94)	95.7%	4.3%
RI (N = 76)	90.8%	9.2%
ME (N = 96)	90.6%	9.4%
NH (N = 157)	91.7%	8.3%
VT (N = 95)	90.5%	9.5%
Totals (N = 622)	91.5%	8.5%

Question: Do you think state government should provide scholarships to students attending private colleges and universities?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 119)	19.3%	41.2%	22.7%	15.1%	1.7%
MA (N = 102)	28.4%	37.3%	13.7%	14.7%	5.9%
RI (N = 80)	25.0%	33.8%	22.5%	13.8%	5.0%
ME (N = 103)	7.8%	33.0%	27.2%	21.4%	10.7%
NH (N = 177)	15.8%	28.2%	22.6%	26.0%	7.3%
VT (N = 111)	33.3%	26.1%	23.4%	8.1%	9.0%
Totals (N = 692)	21.0%	32.8%	22.1%	17.5%	6.6%

Question: Do you think state government should provide financial support for scientific and technological research at private colleges and universities?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 119)	12.6%	47.1%	26.9%	10.9%	2.5%
MA (N = 101)	19.8%	46.5%	19.8%	7.9%	5.9%
RI (N = 82)	24.4%	42.7%	20.7%	8.5%	3.7%
ME (N = 104)	13.5%	47.1%	21.2%	10.6%	7.7%
NH (N = 177)	15.3%	33.3%	26.0%	15.8%	9.6%
VT (N = 110)	13.6%	37.3%	24.5%	13.6%	10.9%
Totals (N = 693)	16.0%	41.4%	23.7%	11.8%	7.1%

Question: At the national level, the High Technology Morrill Act proposes to establish a matching grants program to strengthen science, engineering and technology in our colleges and universities by providing "federal assistance for joint initiatives" of private industry, educational institutions and state governments. Would you support similar legislation in your own state?

	Yes	No
CT (N = 103)	86.4%	13.6%
MA (N = 93)	93.5%	6.5%
RI (N = 75)	90.7%	9.3%
ME (N = 95)	90.5%	9.5%
NH (N = 166)	83.1%	16.9%
VT (N = 101)	83.2%	16.8%
Totals (N = 633)	87.2%	12.8%

Question: Do you think colleges and universities in your state should be exempt from paying real property taxes on land they own that is used for educational purposes?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 116)	41.4%	40.5%	13.8%	2.6%	1.7%
MA (N = 103)	26.2%	43.7%	20.4%	4.9%	4.9%
RI (N = 82)	35.4%	34.1%	18.3%	12.2%	—
ME (N = 104)	47.1%	30.8%	13.5%	4.8%	3.8%
NH (N = 176)	50.0%	24.4%	14.8%	7.4%	3.4%
VT (N = 111)	38.7%	37.8%	12.6%	6.3%	4.5%
Totals (N = 692)	41.0%	34.2%	15.3%	6.2%	3.2%

Question: Some people feel that the property tax exemption is a well-deserved benefit for campuses, but that states may need to reimburse localities for part of the tax revenues lost. Do you agree with this view?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 120)	32.5%	40.0%	15.8%	9.2%	2.5%
MA (N = 100)	21.0%	49.0%	20.0%	6.0%	4.0%
RI (N = 82)	14.6%	43.9%	11.0%	28.0%	2.4%
ME (N = 104)	19.2%	46.2%	15.4%	15.4%	3.8%
NH (N = 178)	21.9%	37.6%	19.1%	16.9%	4.5%
VT (N = 111)	16.2%	45.0%	18.9%	16.2%	3.6%
Totals (N = 695)	21.4%	42.9%	17.1%	15.0%	3.6%

IV. Communication Between Educators and Legislators

Summary: Unfortunately, educators and legislators communicate with each other less than each thinks desirable. In the 1980 NEBHE leadership survey only 23 percent reported satisfaction with the extent of communication between institutions of higher education and government. Response from legislators in this year's survey was almost identical. An even smaller percentage of legislators report satisfaction with the data supplied by colleges and universities for evaluating the effectiveness with which they use tax revenues. Less than a third of legislators had been contacted by representatives of New England's institutions of higher education and just over a quarter had taken the initiative to contact educators to discuss how to use their respective resources to mutual advantage.

Responses:

Question: Do you agree with the view that there is enough communication between New England's higher educational institutions and the region's legislators on how they can help each other?

	Yes	No
CT (N = 116)	22.4%	77.6%
MA (N = 100)	22.0%	78.0%
RI (N = 80)	15.0%	85.0%
ME (N = 99)	20.2%	79.8%
NH (N = 174)	20.7%	79.3%
VT (N = 105)	41.0%	59.0%
Totals (N = 674)	23.6%	76.4%

Question: Have you been contacted by any representatives of New England's higher educational institutions to discuss how to use your respective resources to mutual advantage?

	Yes	No
CT (N = 117)	29.1%	71.9%
MA (N = 101)	43.6%	56.4%
RI (N = 82)	15.9%	84.1%
ME (N = 103)	27.2%	72.8%
NH (N = 174)	25.3%	74.7%
VT (N = 109)	41.3%	58.7%
Totals (N = 686)	30.3%	69.7%

Question: Have you taken the initiative and contacted any representatives of New England's higher educational institutions to discuss how to use your respective resources to mutual advantage?

	Yes	No
CT (N = 118)	29.7%	70.3%
MA (N = 101)	46.5%	53.5%
RI (N = 82)	24.4%	75.6%
ME (N = 99)	25.4%	74.7%
NH (N = 173)	23.7%	76.3%
VT (N = 111)	20.7%	79.3%
Totals (N = 684)	27.9%	72.1%

Question: "Government must be supplied with better data by academia if it is to judge the effectiveness with which higher education uses the tax revenues it receives." Do you agree with this statement?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 119)	48.7%	42.0%	5.0%	.8%	3.4%
MA (N = 101)	49.5%	43.6%	3.0%	—	4.0%
RI (N = 83)	66.3%	20.5%	3.6%	4.8%	4.8%
ME (N = 103)	50.5%	39.8%	7.8%	—	1.9%
NH (N = 179)	55.3%	31.8%	8.4%	2.8%	1.7%
VT (N = 109)	50.5%	37.6%	3.7%	2.8%	5.5%
Totals (N = 694)	53.2%	36.0%	5.6%	1.9%	3.3%

Question: Certain economic trends for both public and private higher education in your state, the region and the nation may be important. Would information on the following be useful? (Percentage responding "yes".)

Trends in:	Tuition	Faculty Salaries	Federal Grants and Contracts	Total Expenditures	Other
CT (N = 104)	89.4%	78.4%	86.5%	86.3%	76.7%
MA (N = 94)	95.7%	77.4%	91.5%	87.9%	75.0%
RI (N = 76)	90.8%	86.1%	92.1%	84.5%	84.2%
ME (N = 96)	90.6%	81.3%	89.4%	81.7%	75.0%
NH (N = 157)	91.7%	77.9%	91.8%	88.5%	64.7%
VT (N = 95)	90.5%	80.9%	87.9%	86.8%	64.5%
Totals (N = 622)	91.5%	79.9%	90.0%	86.2%	72.4%

V. Role of Higher Education in Retraining Mid-career Workers

Summary: Legislators agree that there is an important need for the retraining of workers with obsolete skills in their respective states and that it is important that institutions of higher education assist in this retraining. Two-thirds believe that New England colleges and universities are doing a good job in meeting the labor force needs of private industries in the region. This represents a notable gain over the 47 percent favorable response by legislators to this question in 1980. Clearly higher education has been responding to industries' needs and legislators recognize that fact.

While the overwhelming majority of retraining programs actually in New England two-year and four-year colleges seem to be aimed at workers of age 45 or under, most legislators see the greatest need for retraining at age levels between 35 and 55. Legislators are divided in their views on the appropriate method for funding retraining. Almost half indicate they would support direct funding of vocational education while over 40 percent feel that tax incentives or other benefits should be provided to the private sector. Legislators indicated the lowest support for subsidies to individual workers to pay for retraining.

Responses:

Question: What importance would you assign to the need for retraining programs for workers with obsolete skills in your state?

	Very Important	Somewhat Important	Somewhat Unimportant	Very Unimportant	Don't Know
CT (N = 120)	71.7%	25.0%	.8%	2.5%	—
MA (N = 102)	74.5%	25.5%	—	—	—
RI (N = 82)	84.1%	13.4%	2.4%	—	—
ME (N = 105)	61.9%	33.3%	3.8%	—	1.0%
NH (N = 176)	74.4%	27.2%	2.8%	—	.6%
VT (N = 110)	71.8%	24.5%	2.7%	.9%	—
Totals (N = 695)	72.8%	24.2%	2.2%	.6%	.3%

Question: In your opinion, which age group most needs retraining programs?

Age:	26–35	36–45	46–55	56 +
CT (N = 106)	8.5%	27.4%	61.3%	2.8%
MA (N = 90)	8.9%	42.2%	46.7%	2.2%
RI (N = 76)	5.3%	48.7%	40.8%	5.3%
ME (N = 94)	10.6%	47.9%	37.2%	4.3%
NH (N = 144)	15.3%	45.1%	36.1%	3.5%
VT (N = 96)	14.6%	43.8%	38.5%	3.1%
Totals (N = 606)	11.1%	42.2%	43.2%	3.5%

Question: How important do you think it is that institutions of higher education in your state directly assist in retraining workers for occupational skills that will be in demand by industry?

	Very Important	Somewhat Important	Somewhat Unimportant	Very Unimportant	Don't Know
CT (N = 117)	53.0%	36.8%	7.7%	1.7%	.9%
MA (N = 101)	65.3%	29.7%	5.0%	—	—
RI (N = 81)	67.9%	23.5%	4.9%	2.5%	1.2%
ME (N = 105)	61.0%	29.5%	8.6%	—	1.0%
NH (N = 177)	66.1%	28.2%	4.0%	1.7%	—
VT (N = 109)	59.6%	33.9%	2.8%	.9%	2.8%
Totals (N = 690)	62.2%	30.4%	5.4%	1.2%	.9%

Question: How would you rank New England's colleges and universities on helping to meet the labor-force needs of private industries in the region?

	Excellent	Good	Fair	Poor	Don't Know
CT (N = 120)	7.5%	50.8%	35.0%	3.3%	3.3%
MA (N = 101)	17.8%	67.3%	11.9%	1.0%	2.0%
RI (N = 83)	12.0%	53.0%	28.9%	1.2%	4.8%
ME (N = 104)	13.5%	48.1%	26.9%	7.7%	3.8%
NH (N = 176)	10.8%	58.0%	25.6%	2.8%	2.8%
VT (N = 110)	8.2%	50.0%	35.5%	.9%	5.5%
Totals (N = 694)	11.4%	54.8%	27.4%	2.9%	3.6%

Question: What do you think is the most cost-effective way to finance job retraining?

	Invest in Voc Ed	Subsidies to Individuals	Tax Incentives	Other
CT (N = 112)	29.5%	9.8%	53.6%	7.1%
MA (N = 89)	30.3%	13.5%	49.4%	6.7%
RI (N = 78)	38.5%	9.0%	43.6%	9.0%
ME (N = 98)	62.2%	5.1%	27.6%	5.1%
NH (N = 162)	56.8%	7.4%	32.7%	3.1%
VT (N = 100)	42.0%	5.0%	49.0%	4.0%
Totals (N = 639)	44.6%	8.1%	41.8%	5.5%

Question: Would you support a coordinated system for labor retraining in New England?

	Yes	No
CT (N = 105)	89.5%	10.5%
MA (N = 93)	93.5%	6.5%
RI (N = 78)	91.0%	9.0%
ME (N = 77)	90.9%	9.1%
NH (N = 158)	90.5%	9.5%
VT (N = 98)	83.7%	16.3%
Totals (N = 609)	89.8%	10.2%

NEBHE 1984 SURVEY OF NEW ENGLAND STATE LEGISLATORS

Political scientists frequently describe the legislative branch of state government as the most idiosyncratic and least likely to form lasting regional ties. This New England legislative opinion poll suggests otherwise.

The 1984 Survey of New England State Legislators reflects certain common interests of NEBHE, the Fund for the Improvement of Postsecondary Education (FIPSE) and the National Conference of State Legislatures (NCSL). FIPSE has provided a three-year grant to NEBHE for a series of legislative briefings, state seminars and special publications designed to help legislators define the role of higher education in the development of the new knowledge-intensive, high-tech economy of New England. NCSL has supported NEBHE's effort to collect and disseminate information bearing specifically on the retraining of New England's mid-career work force.

The 1984 legislative survey thus includes questions related to issues of common concern to government, industry and higher education as well as items focused specifically on the retraining of New England's work force. One Rhode Island state senator wrote in reaction to NEBHE's inititiative in this field, "I'm a brand-new legislator but I do have a sincere interest in job training and the role colleges and universities should play in working with government, business and industry. Great idea!"

National studies on the legislative process confirm that in view of their excessive work loads and limited staff support, what legislators want and need most is informed policy analysis, synthesis, and, where possible, bottom-line conclusions to enlighten their deliberations. For NEBHE to satisfy those needs in the area of higher education, surveying the legislators directly as to their attitudes, preferences and level of knowledge was a logical place to start the grant project.

Legislative Rate of Response

It is noteworthy that in the total universe of 1323 legislators in the six states, over 50 percent responded, an achievement that is nothing short of remarkable for such a large group not noted for its docility. The rates of return by state were as follows:

	Total Number	Number Responding	Percentage
CT	187	120	64.2%
MA	200	104	52.0%
RI	150	83	55.3%
ME	184	105	57.1%
NH	424	181	42.7%
VT	178	112	62.9%
Totals	1323	705	53.3%

Although not a strictly representative sample, it is clearly a significant and diverse one, a fact that renders even more impressive the surprising degree of unanimity of some of the reported opinions.

Role of Higher Education in the Economy

Legislators are nearly (98 percent) unanimous in believing that higher education is either very important or fairly important to the New England economy (Table 1), a figure nearly identical to the 97 percent of New England's leadership who thought so in NEBHE's 1980 survey. Eighty-five percent agree (Table 2) that higher education itself is an important industry, again approximating the percentage of leaders who believed so in 1980. They also agree (97 percent) that there is an important need for the retraining of workers with obsolete skills in their respective states (Table 19) and that it is important (92.6 percent) that institutions of higher education assist in this retraining (Table 20). There is some restlessness about translating retraining ideas into action as expressed by participants at NEBHE's December 1983 conference at the John F. Kennedy Presidential Library and as noted by a Maine legislative leader in her survey response: "Too much talk—no action on this issue."

In respect to economic development, legislators reflect the views of the general public in New England as well as in other regions of the country. A 1983 poll of the general public co-sponsored by NEBHE and carried out by Group Attitudes Corp. of New York City indicated that 91 percent of New England residents and 87 percent of the U.S. population as a whole feel that it is important that the resources of colleges and universities be applied to economic growth in their states.

Educators' Attitudes Towards Retraining

The overwhelming agreement among legislators that higher education should participate directly in the retraining of workers is not matched among all areas of higher education. A 1984 NEBHE survey of the directors of continuing education in the 257 chartered institutions of higher education in New England produced the 101 responses reported in Appendix 1. While virtually all the respondents from two-year colleges (public and private) and most of the respondents from four-year public colleges saw retraining as somewhat or very important, more than half the respondents from private four-year colleges felt that retraining programs were either unimportant or not applicable to them. No doubt private institutions view themselves as educators of managers and other professionals rather than as trainers or re-trainers of workers. Some of the legislators responding to this questionnaire have cautioned (see summary following Table 27) that business, not government or higher education, should be managing the effort at retraining and that high schools and vocational technical community colleges not four-year colleges are the appropriate locus for retraining efforts.

Yet the facts are that the population of the southern tier of the New England states, at least, is aging more rapidly and growing more slowly (see Appendix 3 and 4) than that of the country as a whole and will be experiencing a dramatically greater decline in the number of high school graduates from now to the end of the century. If a revolution in high technology is to be carried out, it will have to be carried out in substantial part by present members of the work force. We cannot build our new industrial revolution with the hands and minds of the next generation alone. There simply will not be enough of them.

So the issue of retraining *is* a live one and higher education and government *are* already involved. Of 36 public colleges responding to the survey noted above, 27 reported operating one or more retraining programs while 29 of the 65 private colleges responding reported one or more such programs.

The Need for Better Communication

Unfortunately there is less communication among educators, legislators and business leaders than each see as desirable. In the 1980 NEBHE leadership survey only 23 percent reported being satisfied with the extent of communication between institutions of higher education and government. Table 8 of this year's survey reports a virtually identical response from legislators. An even smaller percentage (11 percent) reports being satisfied with the data being supplied by colleges and universities as a basis for judgment on funding (Table 16). At the same time legislators are impressed with the quality of education in New England (Table 3B), overwhelmingly favor tax incentives to industry to help education (Table 5), favor increased funding of colleges and universities (Table 11) and, also tend to favor help to private institutions through support of scholarship programs (Table 12) or scientific and technological research (Table 13). Not surprisingly the majority supports property tax exemptions for university land used for educational purposes (Table 14), but more surprisingly a majority also supports the idea of state reimbursement to local communities for part of tax revenue thus lost (Table 15).

Quality of New England Higher Education

The generally high regard in which legislators hold the quality of higher education in New England is apparent in a comparison of Tables 3A and B with 90 percent of the respondents rating New England colleges as good or excellent while only 65 percent of colleges in the nation at large receive such a rating. A clear two-thirds majority of legislators believe that these same New England colleges are doing a good or excellent job in helping to meet the labor-force needs of private industry in the region (Table 4), up from the 47 percent favorable response to essentially the same question in the 1980 leadership survey. Clearly, higher education has begun to respond and legislators recognize that fact. A Connecticut state senator says, "Your questionnaire has brought to my attention a resource I have not used adequately and that is the special departments that deal with human services and economics in our institutions of higher learning. Why should we overlook this area of information and assistance? I intend to start some inquiries today."

It is quite possible that the recognition of the positive response from higher education explains at least in part the rather dramatic 87 percent "yes" response (Table 7) to the question of whether legislators favored a state level "High Technology Morrill Act" to provide a matching grants program to strengthen science, engineering and technology in our institutions of higher education.

New England's strength has always been found in higher education, technology and human resources. It is not surprising then that New England's legislators share common concerns with President Reagan's Commission on Industrial Competitiveness which is scheduled to make its recommendations in December, 1984. John Young, chairman of the Commission and president of the Hewlett-Packard Company, emphasizes human resources as one of the five major national factors affecting America's international industrial competitiveness. The human resource factor, according to Young, takes into account *cost*, *quality* and *supply*, especially in engineering and science, which greatly influence the ability of the nation and its states to compete both overseas and at home.

A Coordinated System of Labor Retraining

As for the funding of retraining *per se* (Table 22), the legislators were split between the idea of direct funding of vocational education (44.6 percent) and tax incentives or other benefits to the private sector (41.8 percent) with the idea of subsidies to individual workers to pay for retraining substantially less popular (8.1 percent).

The legislators gave a strong vote of support for the idea of a coordinated system for labor retraining in New England (Table 25) with 89.8 percent announcing themselves in favor. Such unanimity is essentially consistent with the high degree of support reported by a sample of the New England public (1983 Group Attitudes Corporation Survey) to a question about their reactions to the idea of interstate cooperation in academic program offerings and tuition breaks. People appear to realize that greater interstate cooperation in education and training leads to better information, more choices, and improved job opportunities for themselves. Seventy-nine percent of New Englanders favored such cooperation as compared to 68 percent in the national sample. A House member in the state of Vermont emphasizes a regional and state approach over a centralized program. He points out, "New England is somewhat unique in terms of its problems with unemployment. I therefore feel strongly that a regional approach to job skill retraining would be better than one which Washington may devise. After we have a regional approach it should be broken down more to states and regions within the states. Colleges and universities which provide technical training should be encouraged to cooperate—ones that do not should be encouraged to expand (we need more colleges which provide people with job skills)."

Who Needs to be Retrained?

While the overwhelming majority (88 percent) of retraining programs actually in being in New England two-year and four-year colleges seem to be aimed at workers of age 45 or under (Appendix 2), many legislators (46.7 percent) see the greatest need for retraining at age levels above 45 (Table 21). To the extent that the "high-tech revolution" will affect not only the high-tech industry itself but workers in all industries and to the extent that New England workers in manufacturing have a median age of more than 50, the retraining of the post 45-ers seems a legitimate concern.

Legislators admit that they are not well informed about model legislation for retraining programs with only 15 percent (Table 24) indicating that they are aware of such legislation. Their primary sources of information about retraining needs (Table 23) appears to be the government itself (cited by 62.8 percent), followed by the print media (57.2 percent), committee staff (41.3 percent), organized labor (39.7 percent), and television (25.4 percent).

Legislative Information Sources

Sources of information cited as most helpful in making general judgments about funding for higher education (Table 17) were, in order: 1) data demonstrating the application of college resources to economic development in your state; 2) annual data demonstrating proficiency in student learning; 3) first-hand visits to college campuses; 4) oral testimony by college officials, and 5) visual presentations by college officials. Economic trend information about tuition, federal contracts and grants and total expenditures is viewed as especially useful to legislators (Table 6).

Influences regarded as most important for decision-making about funding for higher education were ranked on the average as follows (Table 18): 1) constituents; 2) legislative colleagues; 3) committee chairpersons; 4) legislative leadership, and 5) the governors. It is interesting in the light of the findings to note again that the legislators' positive opinions about higher education closely parallel those of the public surveyed by the Group Attitudes Corporation as cited above. The legislators are indeed in touch with their own constituents.

Education Level of Respondents

The survey questionnaire asked respondents about their own educational backgrounds (Table 27). Roughly two-thirds of the legislators were college graduates and one-third were not. Responses to each question of the survey were tallied against educational level of the respondent. Responses of college graduates were almost identical with those of non-college graduates on all questions but two. Legislators who had *not* graduated from college held a higher opinion of the quality of higher education than those who had graduated, but ironically were somewhat less inclined to increase funding for it.

Summary

What, then, in summary, emerges from this legislative survey? New England legislators, like members of the general public in New England, see their colleges and universities as vital to the economic development of the region. They are favorably disposed to direct aid to higher education or special incentives to industry to move retraining programs forward, but they feel strongly the need for better communication among government, higher education and business and better information about retraining needs, retraining programs and model legislation on retraining. They are strongly disposed to regional collaboration on retraining programs. A House member of the Massachusetts legislature puts it this way: "I am very pleased that you are seriously re-evaluating the role of higher education in the workplace for retraining our constituents. I see no conflict in colleges pursuing both academic horizons and realistic job skills; surely society will be the great beneficiary of such bold educational ventures."

Reading between the lines of the questionnaire one senses a strong, positive, if not totally uncritical attitude of good will toward both higher education and business. One senses an earnest desire for better communication among the sectors of government, business and education and for better interchange of good information about educational and training needs and opportunities. But beyond all this one senses a regional loyalty and an enthusiasm for regional economic and educational development. The public, the legislators, higher education and business all seem ready to pitch in if appropriate programs are designed for each of the parties concerned. Is not now the time to take advantage of common concern and mutual respect and translate it into effective public policy? In the words of a House member of the New Hampshire legislature, "Keep up this kind of initiative and soon concrete proposals and graphic results will follow."

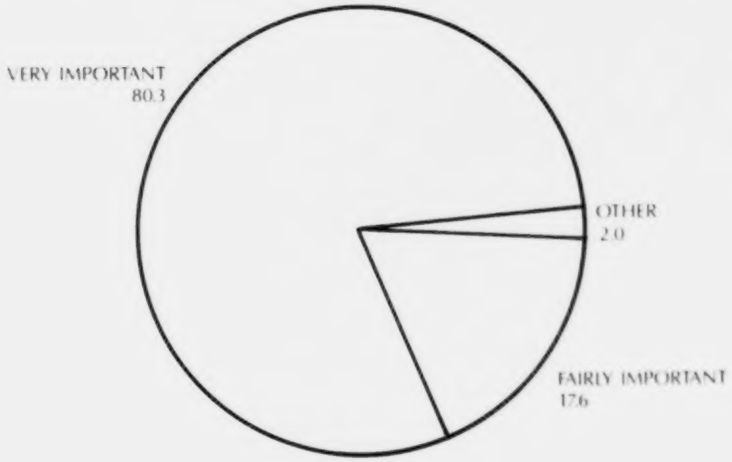
TABLES

NEBHE 1984 Survey of New England Legislators
Table 1

Importance of Higher Education to the Economy

Question: **How important do you think New England's institutions of higher learning are to the economy of the region?**

	Very Important	**Fairly Important**	**Not too Important**	**Not Important at all**	**Don't Know**
CT (N = 120)	65.8%	30.0%	3.3%	—	.8%
MA (N = 103)	85.4%	14.6%	—	—	—
RI (N = 82)	75.6%	20.7%	2.4%	—	1.2%
ME (N = 105)	78.1%	20.0%	1.9%	—	—
NH (N = 178)	87.1%	11.8%	1.1%	—	—
VT (N = 109)	86.2%	11.9%	1.8%		
Totals (N = 697)	80.3%	17.6%	1.7%	—	.3%



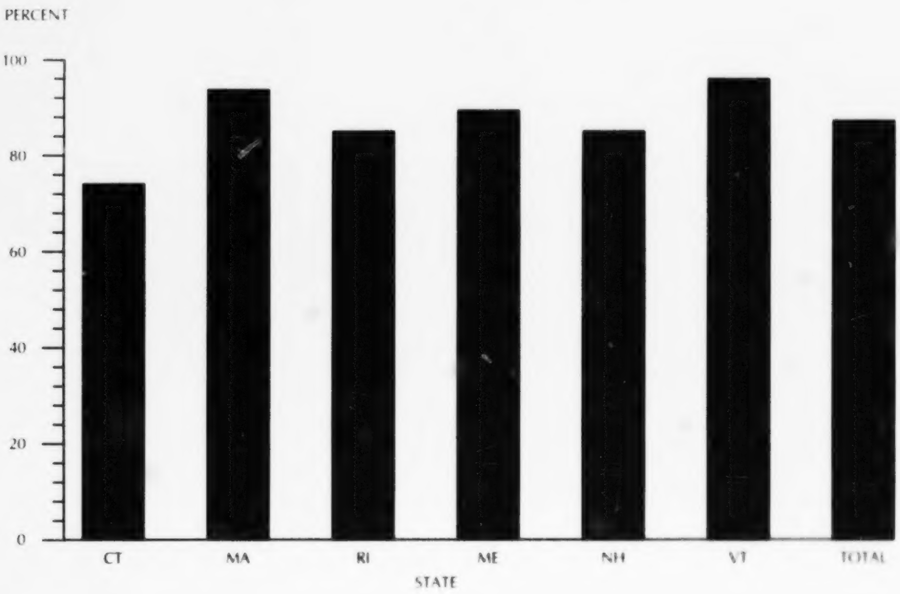
Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators
Table 2

Higher Education as an Industry

Question: **Some people think of New England's higher educational institutions as an industry in the region's economy. Do you agree with this view?**

	Yes	No
CT (N = 115)	75.7%	24.3%
MA (N = 101)	92.1%	7.9%
RI (N = 81)	82.7%	17.3%
ME (N = 102)	87.3%	12.7%
NH (N = 138)	83.1%	16.9%
VT (N = 109)	93.6%	6.4%
Total (N = 674)	85.5%	14.5%

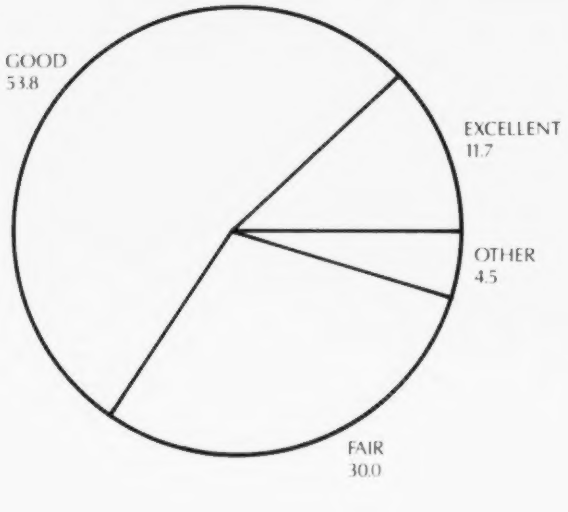


NEBHE 1984 Survey of New England Legislators
Table 3A

Quality of Higher Education in the U.S.

Question: **What is your personal impression of the overall quality of a college or university education *in the U.S.?***

	Excellent	Good	Fair	Poor	Don't Know
CT (N = 119)	7.6%	51.3%	36.1%	—	5.0%
MA (N = 102)	10.7%	57.3%	30.1%	1.0%	1.0%
RI (N = 83)	15.7%	57.8%	24.1%	—	2.4%
ME (N = 104)	10.6%	54.8%	30.8%	—	3.8%
NH (N = 173)	15.6%	47.4%	30.1%	2.9%	4.0%
VT (N = 108)	9.3%	59.3%	26.9%	1.9%	2.8%
Totals (N = 690)	11.7%	53.8%	30.0%	1.2%	3.3%



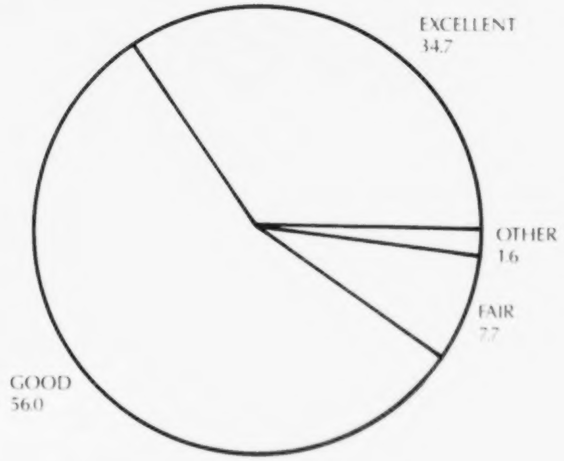
Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators
Table 3B

Quality of Higher Education in New England

Question: **What is your personal impression of the overall quality of a college or university education *in New England?***

	Excellent	Good	Fair	Poor	Don't Know
CT (N = 117)	24.8%	61.5%	11.1%	—	2.6%
MA (N = 103)	35.9%	56.3%	6.8%	—	1.0%
RI (N = 82)	35.4%	58.5%	4.9%	—	1.2%
ME (N = 103)	38.5%	54.4%	5.8%	1.0%	—
NH (N = 173)	42.2%	49.1%	6.4%	—	2.3%
VT (N = 108)	27.8%	60.2%	11.1%	—	.9%
Totals (N = 686)	34.7%	56.0%	7.7%	.1%	1.5%



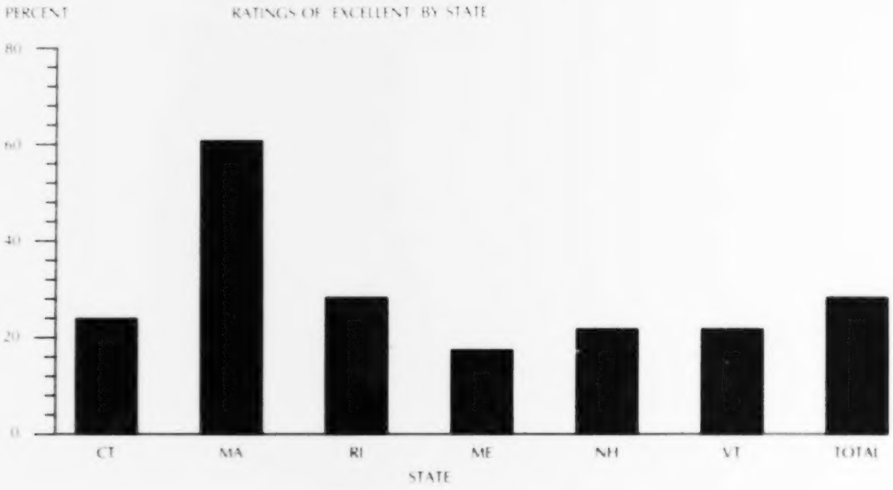
Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators
Table 3C

Quality of Higher Education in Your Own State

Question: **What is your personal impression of the overall quality of a college or university education *in your own state?***

	Excellent	Good	Fair	Poor	Don't Know
CT (N = 115)	23.5%	60.9%	13.0%	.9%	1.7%
MA (N = 102)	60.8%	36.3%	2.9%	—	—
RI (N = 79)	27.8%	54.4%	16.5%	—	1.3%
ME (N = 101)	16.8%	63.4%	19.8%	—	—
NH (N = 171)	22.2%	56.7%	18.7%	1.2%	1.2%
VT (N = 108)	21.3%	65.7%	12.0%	—	.9%
Totals (N = 676)	28.0%	56.5%	14.2%	.4%	.9%

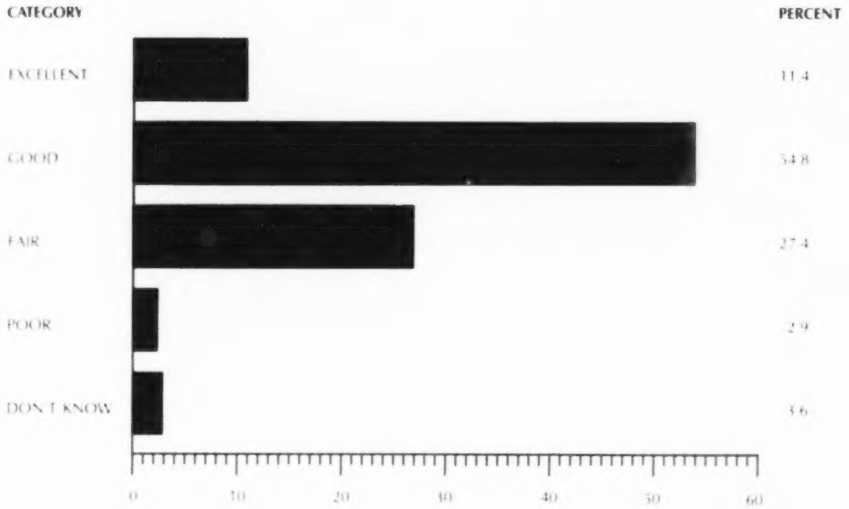


NEBHE 1984 Survey of New England Legislators
Table 4

Higher Education Meeting Labor Force Needs

Question: How would you rank New England's colleges and universities on helping to meet the labor-force needs of private industries in the region?

	Excellent	Good	Fair	Poor	Don't Know
CT (N = 120)	7.5%	50.8%	35.0%	3.3%	3.3%
MA (N = 101)	17.8%	67.3%	11.9%	1.0%	2.0%
RI (N = 83)	12.0%	53.0%	28.9%	1.2%	4.8%
ME (N = 104)	13.5%	48.1%	26.9%	7.7%	3.8%
NH (N = 176)	10.8%	58.0%	25.6%	2.8%	2.8%
VT (N = 110)	8.2%	50.0%	35.5%	.9%	5.5%
Totals (N = 694)	11.4%	54.8%	27.4%	2.9%	3.6%

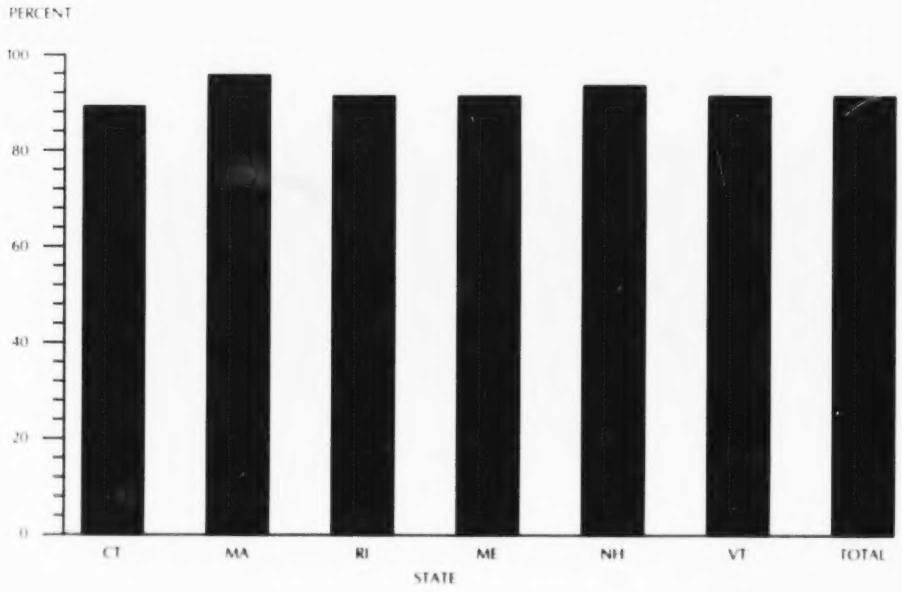


NEBHE 1984 Survey of New England Legislators
Table 5

Tax Incentives for Corporate Contributions to Education

Question: **Do you support special tax incentives to encourage corporate contributions to educational institutions (e.g., equipment, personnel and facilities)?**

	Yes	**No**
CT (N = 117)	89.4%	10.6%
MA (N = 94)	95.7%	4.3%
RI (N = 76)	90.8%	9.2%
ME (N = 96)	90.6%	9.4%
NH (N = 157)	91.7%	8.3%
VT (N = 95)	90.5%	9.5%
Totals (N = 622)	91.5%	8.5%

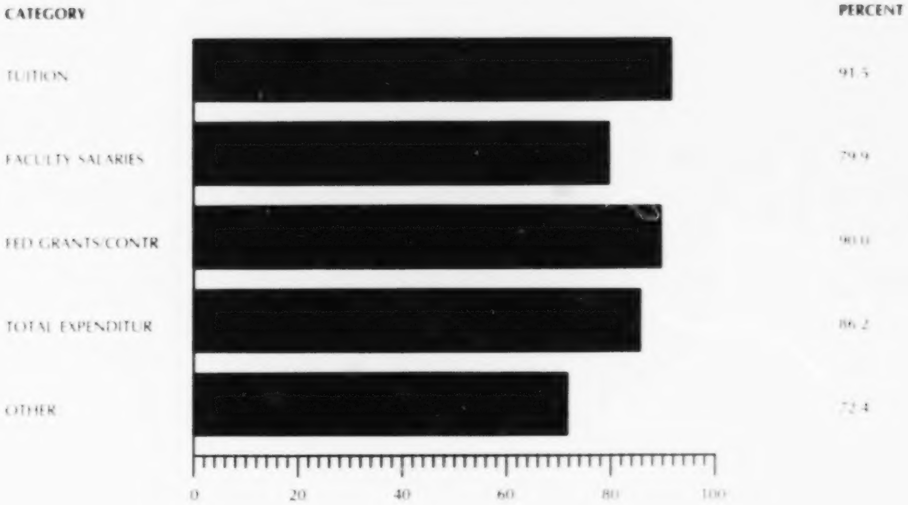


NEBHE 1984 Survey of New England Legislators
Table 6

Information Useful to Legislators

Question: **Certain economic trends for both public and private higher education in your state, the region and the nation may be important. Would information on the following be useful? (Percentage responding "yes".)**

Trends in:	**Tuition**	**Faculty Salaries**	**Federal Grants and Contracts**	**Total Expenditures**	**Other**
CT (N = 104)	89.4%	78.4%	86.5%	86.3%	76.7%
MA (N = 94)	95.7%	77.4%	91.5%	87.9%	75.0%
RI (N = 76)	90.8%	86.1%	92.1%	84.5%	84.2%
ME (N = 96)	90.6%	81.3%	89.4%	81.7%	75.0%
NH (N = 157)	91.7%	77.9%	91.8%	88.5%	64.7%
VT (N = 95)	90.5%	80.9%	87.9%	86.8%	64.5%
Totals (N = 622)	91.5%	79.9%	90.0%	86.2%	72.4%



NEBHE 1984 Survey of New England Legislators
Table 6A

Tabulation of responses to "Other" in Question No. 6

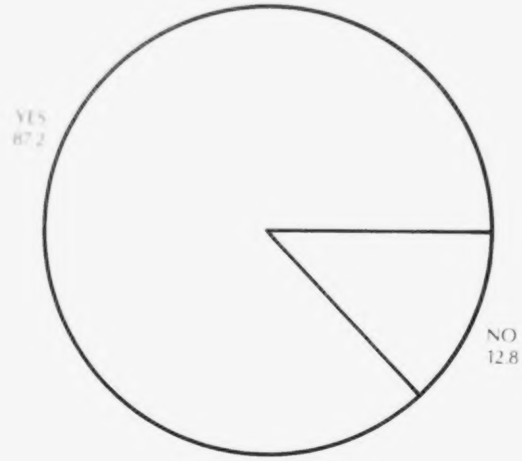
Information on:	**CT**	**MA**	**RI**	**ME**	**NH**	**VT**	**Total**
Scholarship and Financial Aid	3	1	1	2	2		9
Community Services	1		1			1	3
State Appropriations for Public Colleges			2	2	1		5
Graduate Placement		5	1	4	1	2	13
College Enrollment Predictions		2	3		2	1	8
College Administrative Costs	2				3	1	6
College Endowments				1	2	2	5
Miscellaneous	8	7	5	10	8	2	40
Total	14	15	13	19	19	9	89

NEBHE 1984 Survey of New England Legislators
Table 7

State Level High Technology Morrill Act

Question: **At the national level, the High Technology Morrill Act proposes to establish a matching grants program to strengthen science, engineering and technology in our colleges and universities by providing "federal assistance for joint initiatives" of private industry, educational institutions and state governments. Would you support similar legislation in your own state?**

	Yes	**No**
CT (N=103)	86.4%	13.6%
MA (N=93)	93.5%	6.5%
RI (N=75)	90.7%	9.3%
ME (N=95)	90.5%	9.5%
NH (N=166)	83.1%	16.9%
VT (N=101)	83.2%	16.8%
Totals (N=633)	87.2%	12.8%



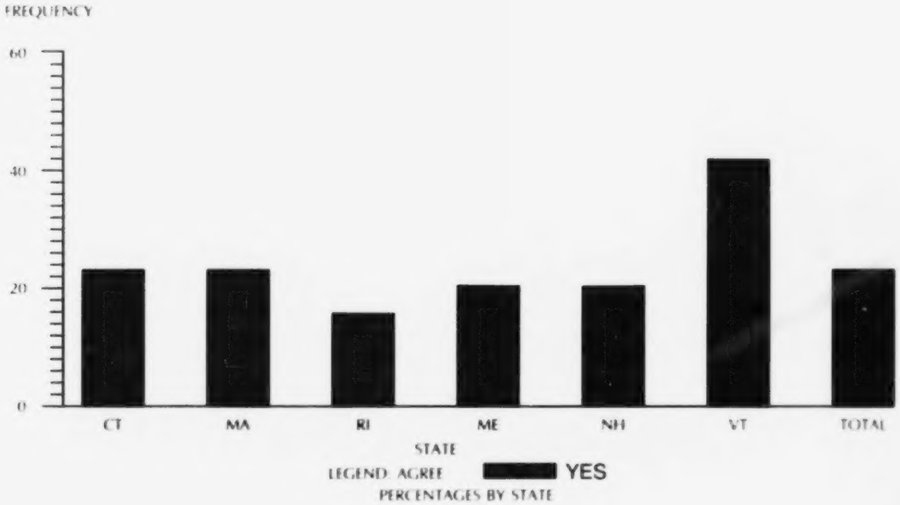
Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators
Table 8

Communication Between Higher Education and Legislatures

Question: **Do you agree with the view that there is enough communication between New England's higher educational institutions and the region's legislators on how they can help each other?**

	Yes	No
CT (N = 116)	22.4%	77.6%
MA (N = 100)	22.0%	78.0%
RI (N = 80)	15.0%	85.0%
ME (N = 99)	20.2%	79.8%
NH (N = 174)	20.7%	79.3%
VT (N = 105)	41.0%	59.0%
Totals (N = 674)	23.6%	76.4%

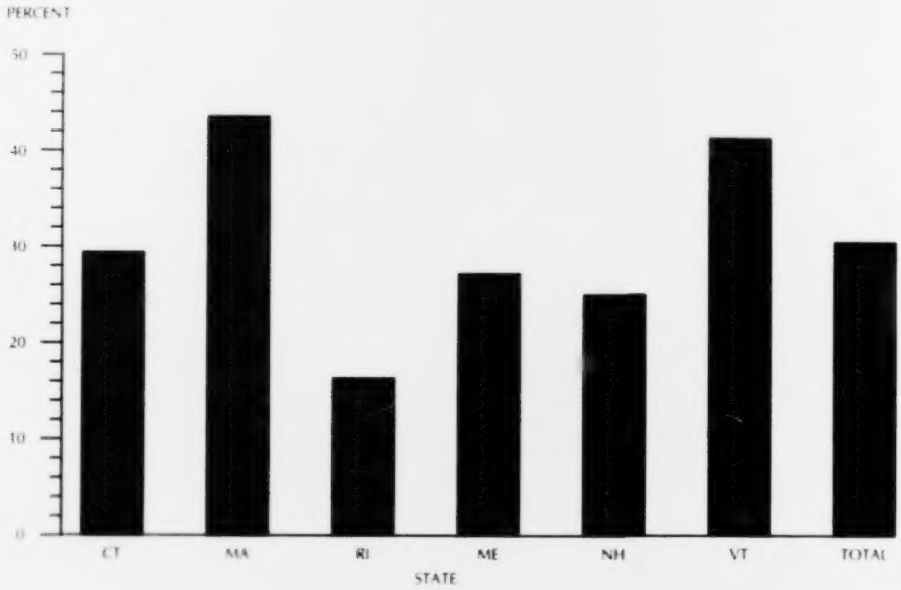


NEBHE 1984 Survey of New England Legislators
Table 9

Contacts from Higher Education

Question: **Have you been contacted by any representatives of New England's higher educational institutions to discuss how to use your respective resources to mutual advantage?**

	Yes	**No**
CT (N = 117)	29.1%	71.9%
MA (N = 101)	43.6%	56.4%
RI (N = 82)	15.9%	84.1%
ME (N = 103)	27.2%	72.8%
NH (N = 174)	25.3%	74.7%
VT (N = 109)	41.3%	58.7%
Totals (N = 686)	30.3%	69.7%

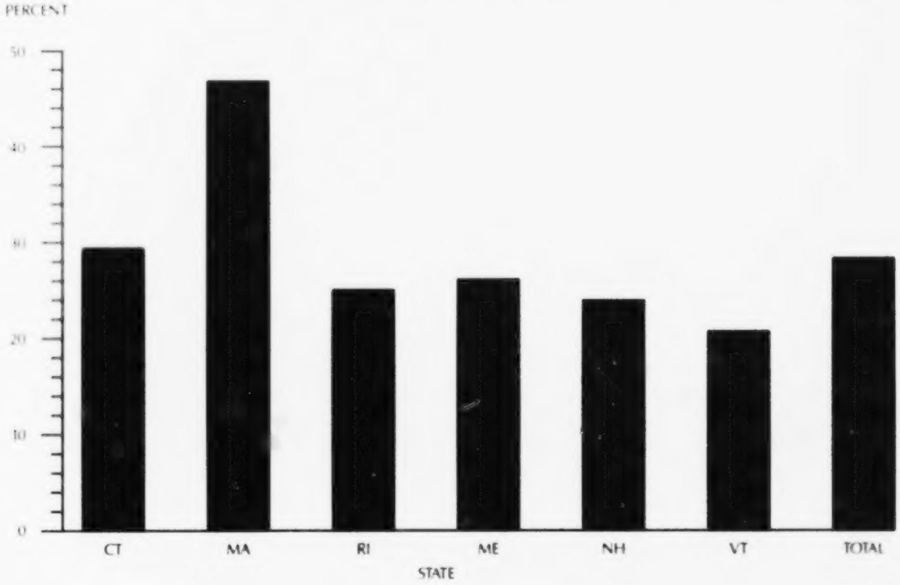


NEBHE 1984 Survey of New England Legislators
Table 10

Legislators' Contacting of Higher Education

Question: **Have you taken the initiative and contacted any representatives of New England's higher educational institutions to discuss how to use your respective resources to mutual advantage?**

	Yes	No
CT (N = 118)	29.7%	70.3%
MA (N = 101)	46.5%	53.5%
RI (N = 82)	24.4%	75.6%
ME (N = 99)	25.4%	74.7%
NH (N = 173)	23.7%	76.3%
VT (N = 111)	20.7%	79.3%
Totals (N = 684)	27.9%	72.1%



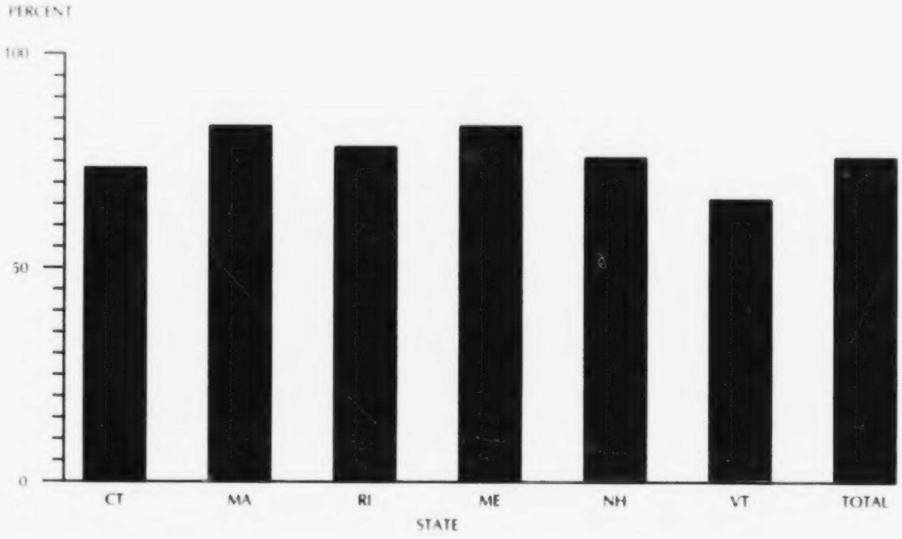
140

NEBHE 1984 Survey of New England Legislators
Table 11

Increasing Funding for Higher Education

Question: If someone suggested increasing state funding for colleges and universities, what would be your response to the suggestion?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 120)	28.3%	45.0%	15.0%	5.0%	6.7%
MA (N = 100)	29.0%	53.0%	11.0%	4.0%	3.0%
RI (N = 78)	34.6%	42.3%	15.4%	1.3%	6.4%
ME (N = 104)	28.8%	52.9%	9.6%	2.9%	5.8%
NH (N = 175)	44.6%	30.3%	13.1%	4.6%	7.4%
VT (N = 107)	13.1%	52.3%	20.6%	7.5%	6.5%
Totals (N = 684)	31.0%	44.4%	14.0%	4.4%	6.1%

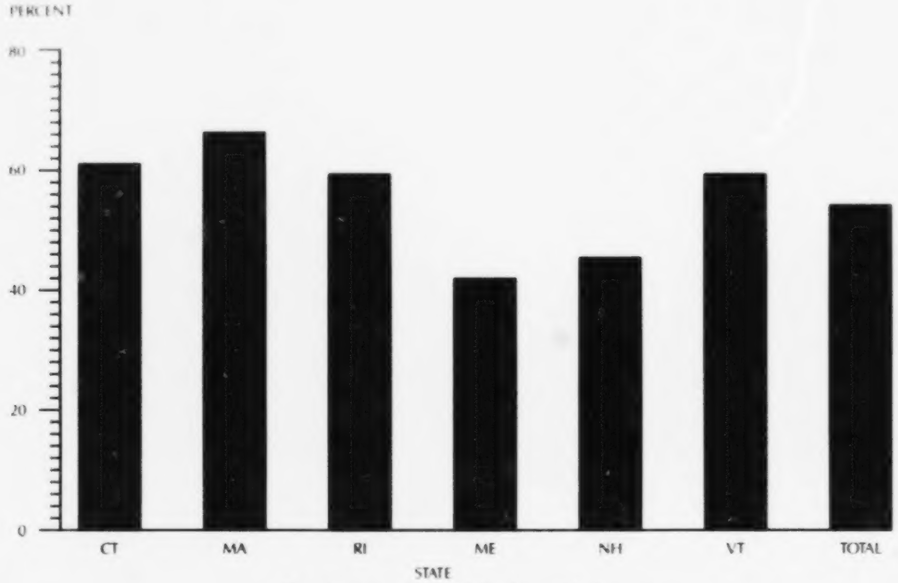


NEBHE 1984 Survey of New England Legislators
Table 12

Support for Scholarships to Private Institutions

Question: **Do you think state government should provide scholarships to students attending private colleges and universities?**

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 119)	19.3%	41.2%	22.7%	15.1%	1.7%
MA (N = 102)	28.4%	37.3%	13.7%	14.7%	5.9%
RI (N = 80)	25.0%	33.8%	22.5%	13.8%	5.0%
ME (N = 103)	7.8%	33.0%	27.2%	21.4%	10.7%
NH (N = 177)	15.8%	28.2%	22.6%	26.0%	7.3%
VT (N = 111)	33.3%	26.1%	23.4%	8.1%	9.0%
Totals (N = 692)	21.0%	32.8%	22.1%	17.5%	6.6%



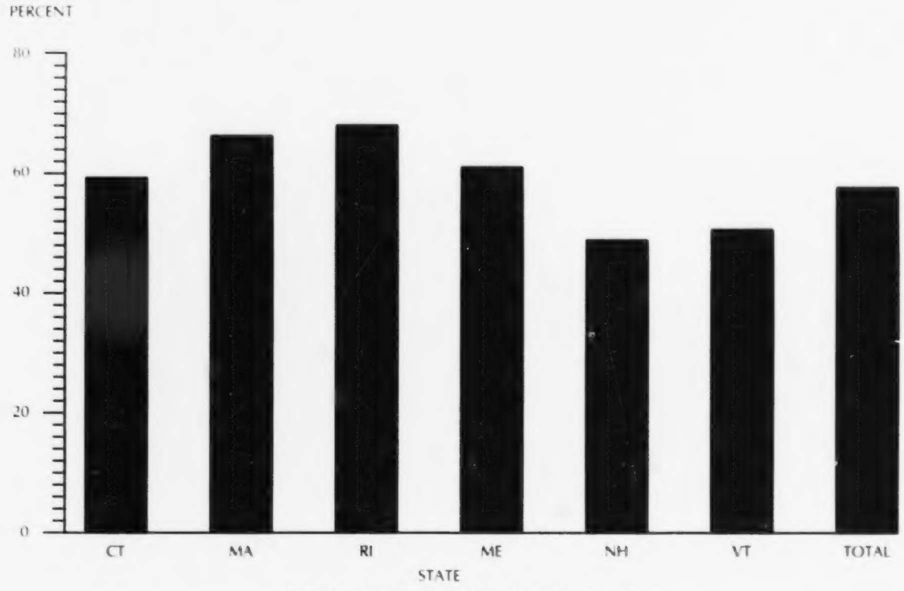
(Sum of percents for "strongly" and "somewhat" agree.)

NEBHE 1984 Survey of New England Legislators
Table 13

Public Support for Research in Private Institutions

Question: **Do you think state government should provide financial support for scientific and technological research at private colleges and universities?**

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 119)	12.6%	47.1%	26.9%	10.9%	2.5%
MA (N = 101)	19.8%	46.5%	19.8%	7.9%	5.9%
RI (N = 82)	24.4%	42.7%	20.7%	8.5%	3.7%
ME (N = 104)	13.5%	47.1%	21.2%	10.6%	7.7%
NH (N = 177)	15.3%	33.3%	26.0%	15.8%	9.6%
VT (N = 110)	13.6%	37.3%	24.5%	13.6%	10.9%
Totals (N = 693)	16.0%	41.4%	23.7%	11.8%	7.1%



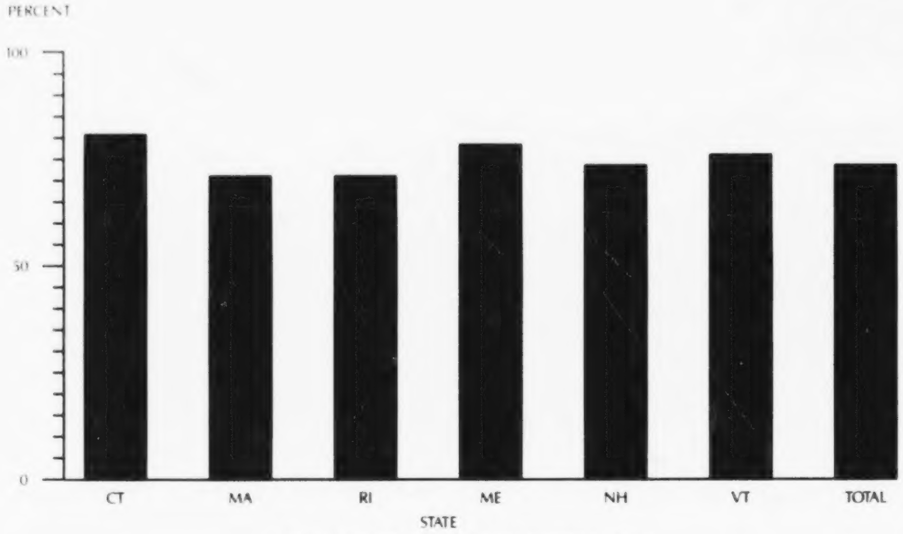
(Sum of percents for "strongly" and "somewhat" agree.)

NEBHE 1984 Survey of New England Legislators
Table 14

Property Tax Exemption

Question: **Do you think colleges and universities in your state should be exempt from paying real property taxes on land they own that is used for educational purposes?**

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 116)	41.4%	40.5%	13.8%	2.6%	1.7%
MA (N = 103)	26.2%	43.7%	20.4%	4.9%	4.9%
RI (N = 82)	35.4%	34.1%	18.3%	12.2%	—
ME (N = 104)	47.1%	30.8%	13.5%	4.8%	3.8%
NH (N = 176)	50.0%	24.4%	14.8%	7.4%	3.4%
VT (N = 111)	38.7%	37.8%	12.6%	6.3%	4.5%
Totals (N = 692)	41.0%	34.2%	15.3%	6.2%	3.2%



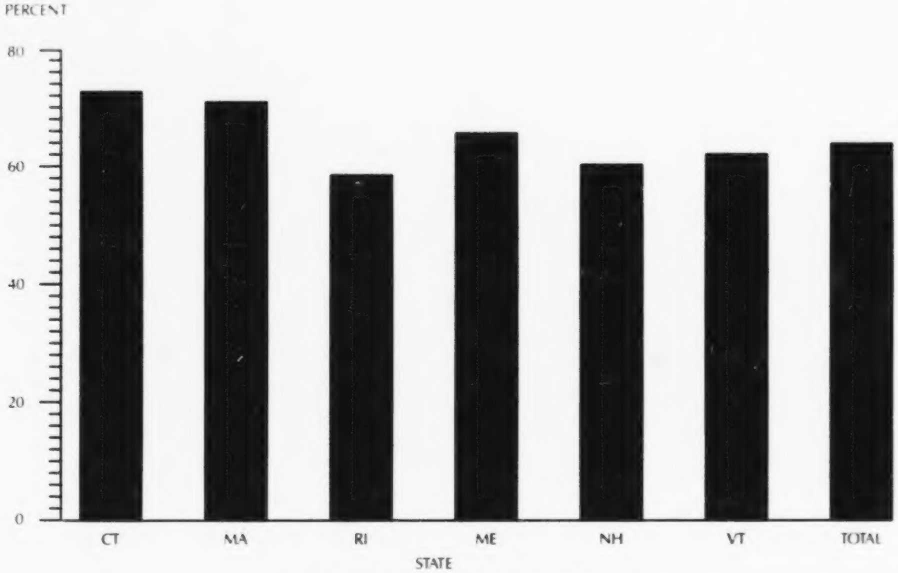
(Sum of percents for "strongly" and "somewhat" agree.)

NEBHE 1984 Survey of New England Legislators
Table 15

Partial State Reimbursement for Property Tax Exemption

Question: **Some people feel that the property tax exemption is a well-deserved benefit for campuses, but that states may need to reimburse localities for part of the tax revenues lost. Do you agree with this view?**

	Strongly Agree	**Somewhat Agree**	**Somewhat Disagree**	**Strongly Disagree**	**Don't Know**
CT (N = 120)	32.5%	40.0%	15.8%	9.2%	2.5%
MA (N = 100)	21.0%	49.0%	20.0%	6.0%	4.0%
RI (N = 82)	14.6%	43.9%	11.0%	28.0%	2.4%
ME (N = 104)	19.2%	46.2%	15.4%	15.4%	3.8%
NH (N = 178)	21.9%	37.6%	19.1%	16.9%	4.5%
VT (N = 111)	16.2%	45.0%	18.9%	16.2%	3.6%
Totals (N = 695)	21.4%	42.9%	17.1%	15.0%	3.6%



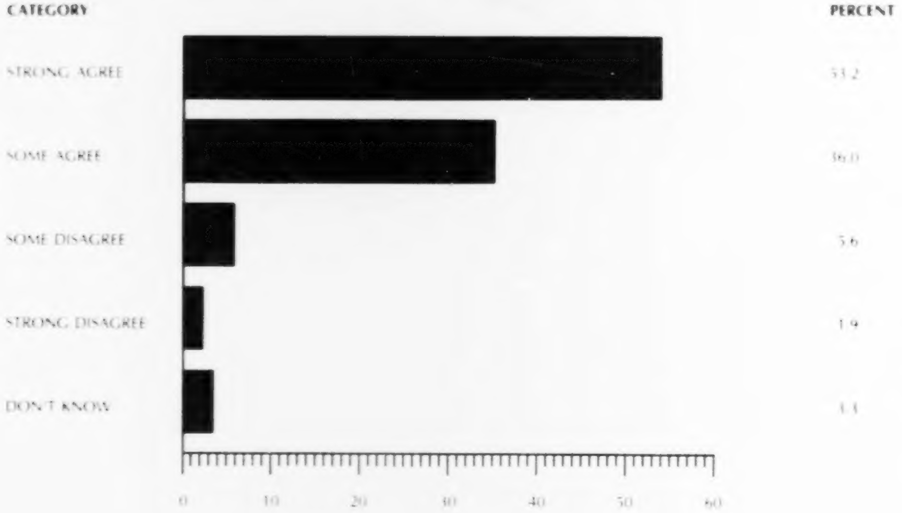
(Sum of percents for "strongly" and "somewhat" agree.)

NEBHE 1984 Survey of New England Legislators
Table 16

Better Data from Academia

Question: **"Government must be supplied with better data by academia if it is to judge the effectiveness with which higher education uses the tax revenues it receives." Do you agree with this statement?**

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
CT (N = 119)	48.7%	42.0%	5.0%	.8%	3.4%
MA (N = 101)	49.5%	43.6%	3.0%	—	4.0%
RI (N = 83)	66.3%	20.5%	3.6%	4.8%	4.8%
ME (N = 103)	50.5%	39.8%	7.8%	—	1.9%
NH (N = 179)	55.3%	31.8%	8.4%	2.8%	1.7%
VT (N = 109)	50.5%	37.6%	3.7%	2.8%	5.5%
Totals (N = 694)	53.2%	36.0%	5.6%	1.9%	3.3%



NEBHE 1984 Survey of New England Legislators
Table 17

Preferred Modes of Studying Higher Education

Question: In your view, which of the following is most helpful to you in making decisions about funding higher education? (Please rank in order of priority, 1 = most helpful and 5 = least helpful.)

a. Visits to college campuses initiated by college officials that provide a tour of the facilities and information about programs
b. Oral testimony by college officials before legislative committees
c. A visual presentation highlighting the main points of testimony
d. Data demonstrating the application of college resources to further economic development in your state
e. Annual data demonstrating proficiency in student learning
f. Other

	Median Rank*				
Median Rank of:	**Visits to Campuses**	**Oral Testimony**	**Visual Presentation**	**Data Re Economic Development**	**Data Re Student Proficiency**
CT (N = 117)	2.7	3.5	3.4	1.9	2.4
MA (N = 92)	3.3	3.1	3.9	1.5	2.2
RI (N = 81)	2.6	3.2	3.5	2.2	2.2
ME (N = 100)	3.2	3.0	3.4	1.7	2.5
NH (N = 161)	2.3	2.6	3.2	2.3	2.9
VT (N = 105)	2.5	2.8	3.4	2.2	3.2
Totals (N = 656)	2.7	3.0	3.4	1.9	2.5
Overall Ranking	3	4	5	1	2

*Within each category half the respondents indicated a higher ranking than the one reported here and half indicated a lower ranking.

NEBHE 1984 Survey of New England Legislators
Table 17A

Tabulation of responses to "Other" in Question No. 17

	CT	MA	RI	ME	NH	VT	Total
Impact on budget	3		1	3	2		9
General Knowledge	1		2			1	4
Input from Students	1		1	1	1	3	7
Data on Student Activity after Graduation		2	1	1	2	2	8
Miscellaneous	6	4	4	7	6	2	29
Totals	11	6	9	12	11	8	57

NEBHE 1984 Survey of New England Legislators
Table 18

Influences in Decision Making

Question: **What influences do you take into account most in making decisions in the funding of higher education? (Please rank in order of importance, 1 = most important and 5 = least important.)**

	Median Rank*				
Median Ranking for:	**Governor**	**Legislative Leadership**	**Committee Chair**	**Legislative Colleagues**	**Constituents**
CT (N = 115)	4.4	3.5	2.7	2.5	1.8
MA (N = 94)	3.3	3.3	2.2	2.7	1.9
RI (N = 77)	3.4	1.9	3.4	2.8	1.8
ME (N = 102	3.5	3.2	3.2	2.4	1.8
NH (N = 156)	4.2	3.1	2.2	2.4	1.8
VT (N = 106)	3.7	3.6	2.8	2.6	1.6
Totals (N = 650)	3.7	3.2	2.8	2.5	1.8
Overall Ranking	5	4	3	2	1

*Within each category half the respondents indicated a higher ranking than the one reported here and half indicated a lower ranking.

NEBHE 1984 Survey of New England Legislators
Table 18A

Tabulation of responses to "Other" in Question No. 18

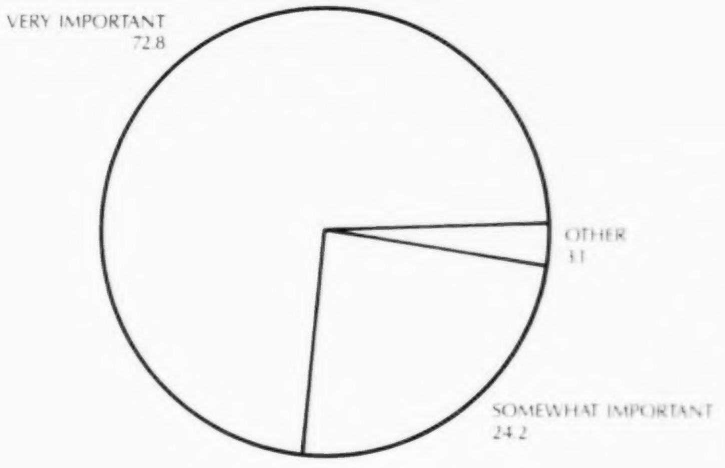
	CT	**MA**	**RI**	**ME**	**NH**	**VT**	**Total**
Personal Opinions/Experience	3	5	8	6	9	8	39
College People	1	2	4	1	6	4	18
Needs of Students	4		3		8	2	17
Budget/Costs	2		2		2	1	7
Available Funds	2			1	3	2	8
Analysis of Data	1	1	1	2	3	3	11
Committees				4	2		6
Miscellaneous	6	4	2	8	2	3	25
Totals	19	12	20	22	35	23	131

NEBHE 1984 Survey of New England Legislators
Table 19

Importance of Retraining Programs

Question: **What importance would you assign to the need for retraining programs for workers with obsolete skills in your state?**

	Very Important	Somewhat Important	Somewhat Unimportant	Very Unimportant	Don't Know
CT (N = 120)	71.7%	25.0%	.8%	2.5%	—
MA (N = 102)	74.5%	25.5%	—	—	—
RI (N = 82)	84.1%	13.4%	2.4%	—	—
ME (N = 105)	61.9%	33.3%	3.8%	—	1.0%
NH (N = 176)	74.4%	27.2%	2.8%	—	.6%
VT (N = 110)	71.8%	24.5%	2.7%	.9%	—
Totals (N = 695)	72.8%	24.2%	2.2%	.6%	.3%



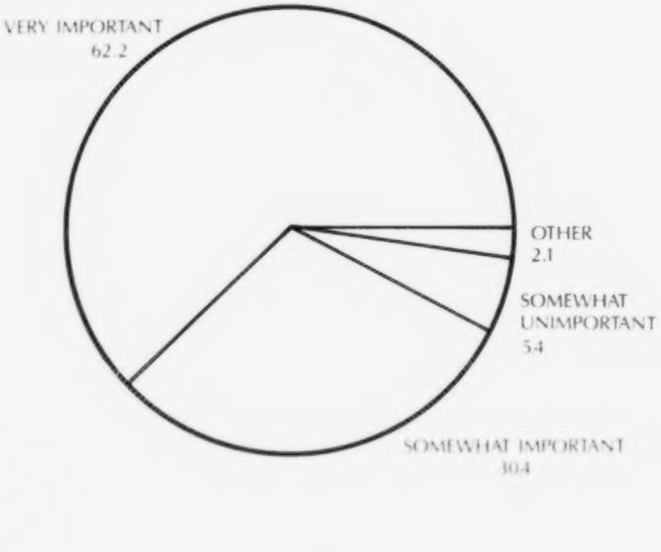
Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators
Table 20

Higher Education and Retraining

Question: **How important do you think it is that institutions of higher education in your state directly assist in retraining workers for occupational skills that will be in demand by industry?**

	Very Important	Somewhat Important	Somewhat Unimportant	Very Unimportant	Don't Know
CT (N = 117)	53.0%	36.8%	7.7%	1.7%	.9%
MA (N = 101)	65.3%	29.7%	5.0%	—	—
RI (N = 81)	67.9%	23.5%	4.9%	2.5%	1.2%
ME (N = 105)	61.0%	29.5%	8.6%	—	1.0%
NH (N = 177)	66.1%	28.2%	4.0%	1.7%	—
VT (N = 109)	59.6%	33.9%	2.8%	.9%	2.8%
Totals (N = 690)	62.2%	30.4%	5.4%	1.2%	.9%



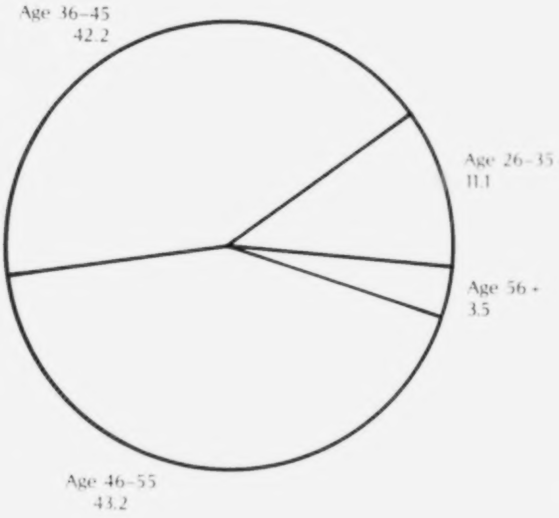
Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators
Table 21

Age and Retraining

Question: In your opinion, which age group most needs retraining programs?

Age:	**26–35**	**36–45**	**46–55**	**56 +**
CT (N = 106)	8.5%	27.4%	61.3%	2.8%
MA (N = 90)	8.9%	42.2%	46.7%	2.2%
RI (N = 76)	5.3%	48.7%	40.8%	5.3%
ME (N = 94)	10.6%	47.9%	37.2%	4.3%
NH (N = 144)	15.3%	45.1%	36.1%	3.5%
VT (N = 96)	14.6%	43.8%	38.5%	3.1%
Totals (N = 606)	11.1%	42.2%	43.2%	3.5%



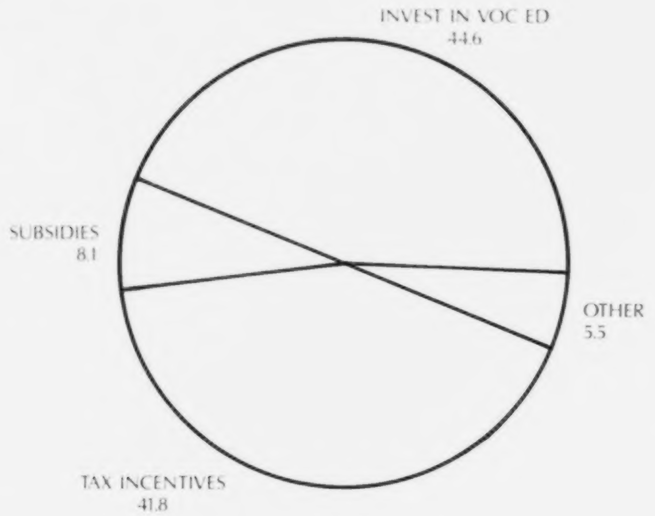
Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators
Table 22

Method of Financing Retraining

Question: What do you think is the most cost effective way to finance job retraining?

	Invest in Voc Ed	Subsidies to Individuals	Tax Incentives	Other
CT (N = 112)	29.5%	9.8%	53.6%	7.1%
MA (N = 89)	30.3%	13.5%	49.4%	6.7%
RI (N = 78)	38.5%	9.0%	43.6%	9.0%
ME (N = 98)	62.2%	5.1%	27.6%	5.1%
NH (N = 162)	56.8%	7.4%	32.7%	3.1%
VT (N = 100)	42.0%	5.0%	49.0%	4.0%
Totals (N = 639)	44.6%	8.1%	41.8%	5.5%



Sum of percent grouped by category

152

NEBHE 1984 Survey of New England Legislators
Table 22A

Tabulation of responses to "Other" in Question No. 22

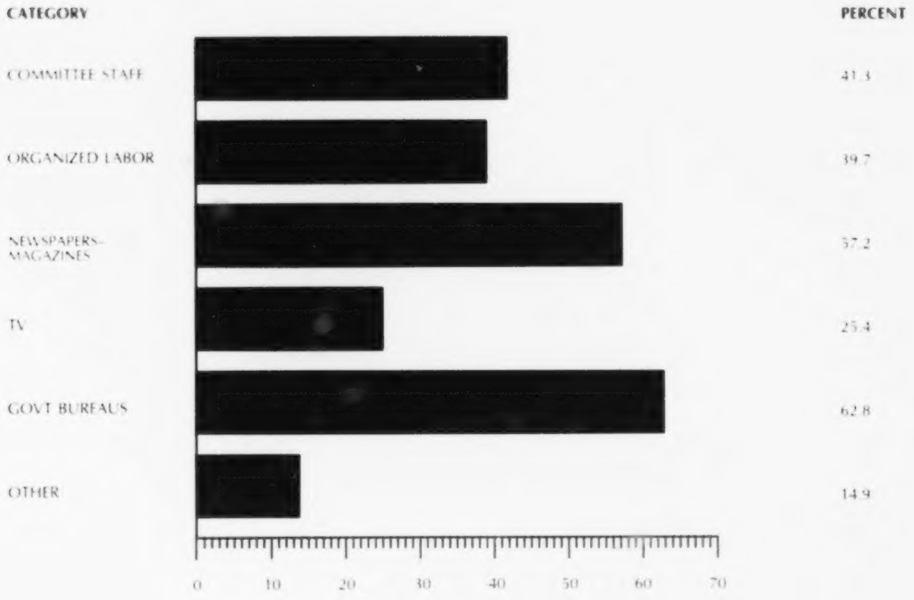
	CT	MA	RI	ME	NH	VT	Total
Split Cost (Government and Industry		1	1		5	2	9
Individual Payment	3	1					4
Combination of all answers	1	2		1	2		6
Miscellaneous	3	4	8	2	6	3	26
Totals	7	8	9	3	13	5	45

NEBHE 1984 Survey of New England Legislators
Table 23

Sources of Information on Retraining Needs

Question: What sources do you rely on for information concerning job retraining needs?

	Committee Staff	Organized Labor	Newspapers Magazines	TV	Government Bureaus	Other
CT (N = 120)	45.0%	48.3%	55.0%	15.0%	70.8%	18.3%
MA (N = 104)	57.7%	48.1%	47.1%	17.3%	72.1%	9.6%
RI (N = 83)	24.1%	38.6%	59.0%	26.5%	60.2%	8.4%
ME (N = 105)	42.9%	42.9%	61.9%	34.3%	57.1%	23.8%
NH (N = 181)	38.7%	35.9%	58.0%	24.3%	58.6%	16.6%
VT (N = 112)	37.5%	26.8%	61.6%	36.6%	59.8%	9.8%
Totals (N = 705)	41.3%	39.7%	57.2%	25.4%	62.8%	14.9%



NEBHE 1984 Survey of New England Legislators
Table 23A

Tabulation of responses to "Other" in Question No. 23

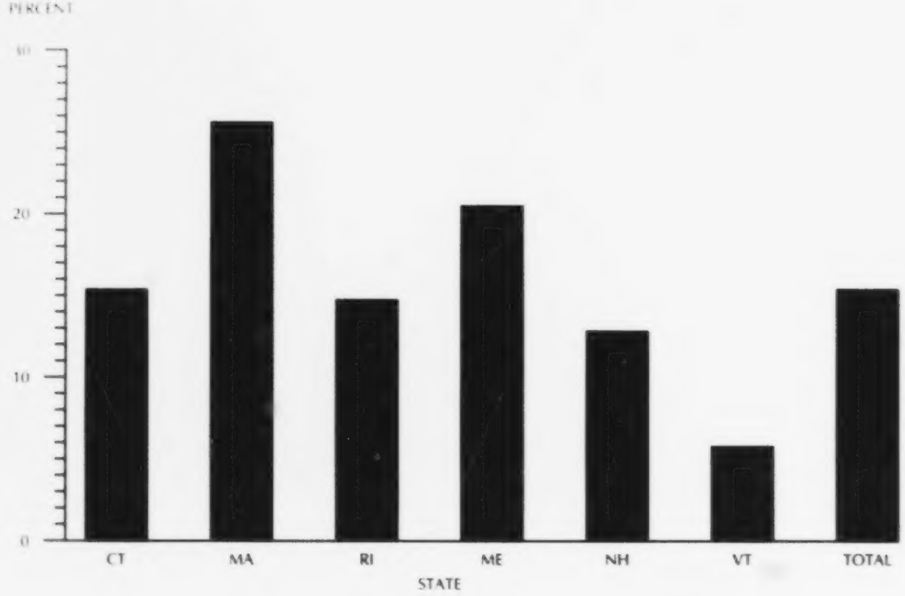
	CT	MA	RI	ME	NH	VT	Total
Industry	14	2	1	7	9	3	36
Personal Opinion	4	1	2	4	3	2	16
Constituents	3	1	1	2	8	1	16
Local Goverment Officials		3	1		4		8
JTPA Officials		2		2			4
Miscellaneous	6	2	5	6	13	4	36
Totals	27	11	10	21	37	10	116

NEBHE 1984 Survey of New England Legislators
Table 24

Awareness of Model Legislation in Retraining

Question: Are you aware of any model legislation for retraining programs?

	Yes	**No**
CT (N = 106)	15.1%	84.9%
MA (N = 98)	25.5%	74.5%
RI (N = 77)	14.3%	85.7%
ME (N = 100)	20.0%	80.0%
NH (N = 167)	12.6%	87.4%
VT (N = 108)	5.6%	94.4%
Totals (N = 650)	15.1%	84.9%

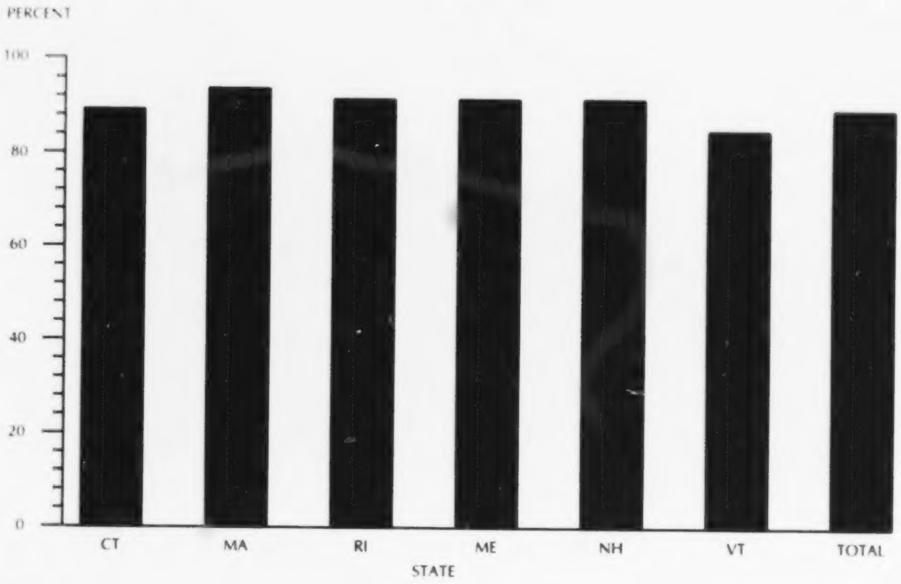


NEBHE 1984 Survey of New England Legislators
Table 25

Coordinated System for Retraining in New England

Question: **Would you support a coordinated system for labor retraining in New England?**

	Yes	No
CT (N = 105)	89.5%	10.5%
MA (N = 93)	93.5%	6.5%
RI (N = 78)	91.0%	9.0%
ME (N = 77)	90.9%	9.1%
NH (N = 158)	90.5%	9.5%
VT (N = 98)	83.7%	16.3%
Totals (N = 609)	89.8%	10.2%



NEBHE 1984 Survey of New England Legislators
Table 26

Respondents' Affiliation

Question: In which chamber of the legislature do you serve?

	House	Senate
CT (N = 118)	81.4%	18.6%
MA (N = 101)	80.2%	19.8%
RI (N = 83)	67.5%	32.5%
ME (N = 104)	80.8%	19.2%
NH (N = 178)	98.9%	1.1%
VT (N = 108)	91.7%	8.3%
Totals (N = 692)	85.5%	14.5%

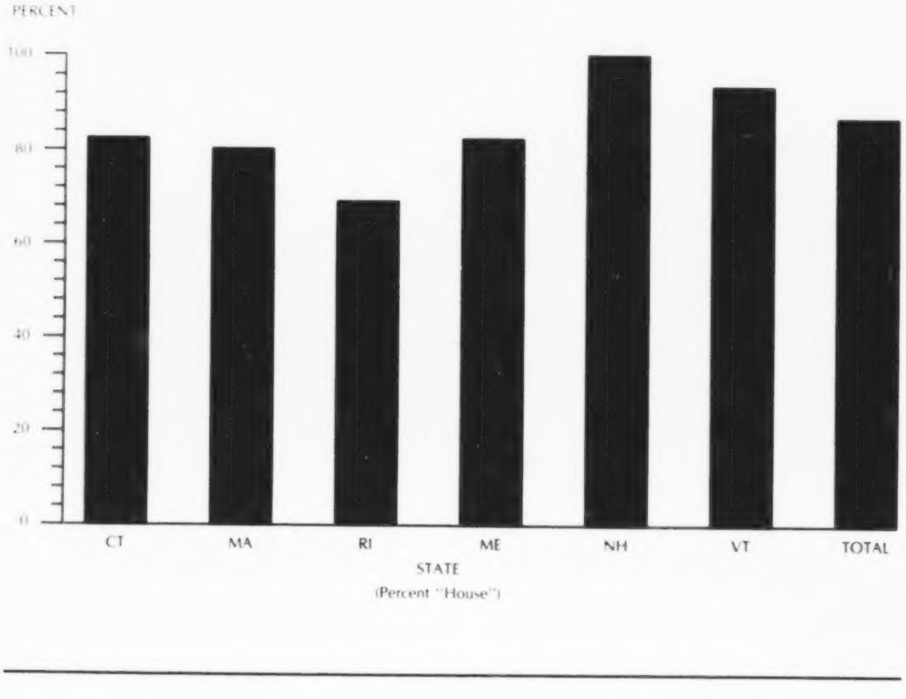


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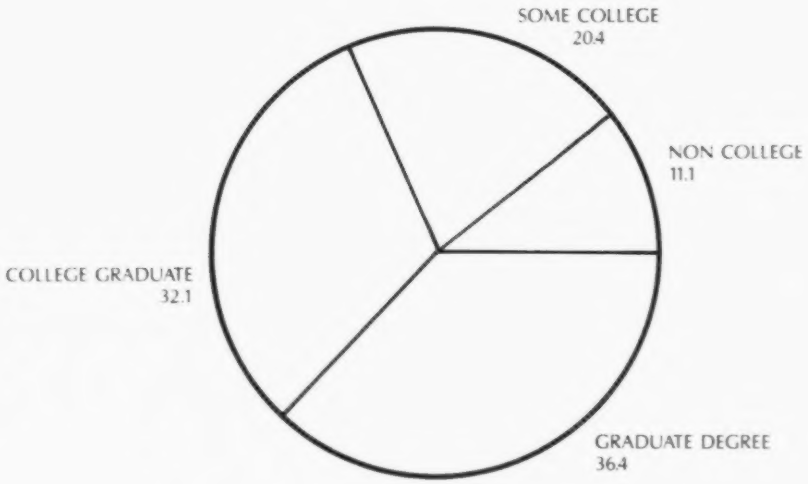
Table 27

Respondents' Level of Schooling

Question: Indicate the highest level of schooling which you have completed.

	Non College	Some College	College Graduate	Graduate Degree
CT (N = 119)	5.9%	16.8%	36.1%	41.2%
MA (N = 100)	8.0%	15.0%	24.0%	53.0%
RI (N = 82)	4.9%	18.3%	18.3%	58.5%
ME (N = 105)	12.4%	26.7%	35.2%	25.7%
NH (N = 177)	13.0%	24.9%	35.6%	26.6%
VT (N = 109)	20.2%	17.4%	36.7%	25.7%
Totals (N = 692)	11.1%	20.4%	32.1%	36.4%



Sum of percent grouped by category

NEBHE 1984 Survey of New England Legislators

Summary of General Comments

	CT	MA	RI	ME	NH	VT	Total
Good questionnaire—good luck	1	3	3	3	4	3	17
Poor questionnaire	4	1	1	1	1	3	11
Need more info about and coordination with secondary ed—(Don't have colleges do work of secondary schools)		1	6	3	2	2	13
Only the small specialized state tech schools appropriate for retraining of workers	1		1	1	1	1	5
Only industry & Labor can really retrain work force (in place) (Gov't. should not attempt to manage the retraining)			1	4	3	3	11
Gov't should function only as catalyst between education & industry			1	1	2	1	5
Gov't & ed need better communication			1		4		5
Retraining a *personal* responsibility	2		1		1		4
Don't give higher ed more money without better cost controls	1	2	3	1	1	1	9
Regional use of training facilities including high schools (less duplication)	3			1		2	6
Need for better manpower counseling			3	1	1		5

NEBHE 1984 Survey of New England Legislators

Other comments include the following:

1. Video retraining courses for home or public libraries
2. Better agreement between labor and management needed on retraining
3. Business, not government should pay for retraining
4. Need for region-wide data base on training and retraining
5. Use universities as a resource for manpower information
6. Design retraining so as to attract new industry
7. Generate better business climate to retain present jobs
8. Keep politics out of funding for higher ed
9. Fund the essentials not the frills
10. Basic skills (including reading and writing) more important than job-specific ones
11. More in-state coordination needed probably from state universities
12. Don't retrain the unemployed for non-existent jobs
13. Need for new tax structure and new tax incentives
14. Private colleges need public support
15. Private colleges don't need public support

APPENDICES

Appendix 1

Response to question: "What importance does your institution assign to the need for retraining programs for *workers* with obsolete vocational skills in the community which you serve? (Circle *one* letter.)

	Public		**Private**	
Institutions	**2 Yr**	**4 Yr**	**2 Yr**	**4 Yr**
Very Important	13	5	5	8
Somewhat Important	7	6	7	10
Somewhat Unimportant	—	1	—	6
Very Unimportant	—	—	1	3
Not Applicable	1	3	1	24
Total	21	15	14	51

Source: NEBHE 1984 Survey of Directors of Continuing Education

Appendix 2

Composite Age Distribution of Participants in Retraining Programs at 56 New England Institutions of Higher Education

Age	
25 or below	14%
26–35	39%
36–45	35%
46–55	10%
56 or above	2%

Appendix 3

Total Population for U.S. and New England States, 1979 to 2000

	Growth Rate (Percent)		
	1970–80	**1980–90**	**1990–2000**
Total U.S.	11.4%	11.2%	8.7%
New England	4.2	6.4	4.4
Connecticut	2.5	1.4	−1.1
Massachusetts	0.8	2.1	0.3
Rhode Island	−0.3	2.9	−0.2
Maine	13.2	17.4	13.9
New Hampshire	24.8	24.4	28.5
Vermont	14.8	20.7	16.9

Source: George Masnick and John Pitkin, "The Changing Population of States and Regions," (Cambridge, Mass: The Joint Center for Urban Studies, August 1982).

Appendix 4

Pattern of Projected High School Graduates 1981–2000: Percentage Change from 1981

	1986	**1988**	**1992**	**1999**
United States	−14	−10	−22	−9
Connecticut	−18	−17	−39	−31
Massachusetts	−17	−18	−42	−35
Rhode Island	−21	−19	−41	−31
Maine	−16	−13	−30	−22
New Hampshire	−12	−7	−32	−19
Vermont	−11	−3	−22	−5

Source: High School Graduates: Projections for the Fifty States (1982–2000) by William R. McConnell, Norman Kaufman, Boulder, Colorado: 1984, Western Interstate Commission for Higher Education

UNIVERSITY OF MAINE *at Farmington*

Office of the President

86 Main Street
Farmington, Maine 04938
207-778-3501

March 6, 1986

MAR 10 1986

Dr. John Hoy, President
New England Board of Higher Education
45 Temple Place
Boston, Massachusetts 02111

Dear John:

The NEBHE Legislative Briefing in Augusta two weeks ago was excellent. You and Mel not only reminded us of the progress being made by other New England states, but you challenged our leadership to respond to this crucial time for higher education in Maine. I left that meeting feeling that the session was valuable -- time very well spent (and one does not feel that way often enough).

Thank you for the planning and effort that have gone into these briefing sessions. I wish you could do them once a year in each state. Is there any chance of that happening?

At any rate, please know how much the briefing was appreciated -- and needed.

Cordially,

Judith A. Sturnick
President

JAS/c

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November 19, 1984

Melvin H. Bernstein
New England Board of Higher Education
45 Temple Place
Boston, MA 02111

Dear Mr. Bernstein:

I was very happy to have been representing Chancellor Joseph Duffey at your legislative briefing in Boston last week. The work you are doing is most impressive, not to mention extremely useful to many of us throughout New England.

The materials packet you handed out is a gold mine, but unfortunately I had to turn it over to Chancellor Duffey. Would it be possible for you to send me a copy of Reviewing Excellence and the handouts on demography, educational attainment, enrollments in higher education, and funding? They would be very helpful to us!

Connection is every bit as handsome as it is useful. What is the procedure for receiving it regularly?

Again, thank you for the opportunity to learn more about NEBHE and the important work you are doing.

I look forward to receiving the materials from the briefing.

Sincerely yours,

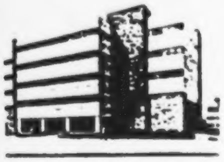
Don Drake

Donald E. Drake II
Grants Officer

DED/gcg

UNIVERSITY OF KENTUCKY
College of Pharmacy
Lexington, Kentucky 40536-0053
1985-1986

College of Pharmacy
Albert B. Chandler Medical Center



15th Anniversary
25th anniversary

March 27, 1986

Mr. Melvin Bernstein
Bernstein Group, Inc.
50 Milk Street, Suite 1500
Boston, MA 02190

Dear Mr. Bernstein:

I have finished reading with interest your article in the summer 1985 issue of the Educational Record, "Forging New Legislative Alliances: Higher Education in the State Capital." The information contained in the article was of particular interest to me because I am currently involved in efforts to implement a center for pharmaceutical sciences and technology at the University of Kentucky, located in Lexington, Kentucky. Such a center would draw together the multidisciplined research talents existing within the College of Pharmacy and other collaborative departments, as well as within the UK medical center and the University as a whole. It is believed that such a center would facilitate the necessary partnerships between the University and industry which could result in high quality research and, at the same time, foster economic development in our region.

It is with the latter focus that your article provided food for thought. Those of us at universities are always interested in ways of improving the information flow between the university and the state legislature.

For that reason I would be interested in knowing if any reports were issued out of the New England Board of Higher Education's three year effort to form an alliance between higher education and the respective legislators. I would like a copy of that report if one is available. If my questions would be better directed toward another agency, entity or person, please let me know.

I am in the information gathering stage of my work and any reports available on this general topic would be of great interest.

Sincerely,
Sylvia L. Lovely
Sylvia L. Lovely, J.D.
Institutional Staff Officer
(606) 233-6608

COMMONWEALTH OF KENTUCKY
COUNCIL ON HIGHER EDUCATION
FRANKFORT
40601

HARRY M. SNYDER
EXECUTIVE DIRECTOR

July 2, 1985

Dear President Hoy:

Governor Collins shared your letter and the report of the legislative policy briefing with us. I found it to be very interesting and it appears to have been very helpful in informing the legislators of the past accomplishments and the future goals and needs of the education system in New England. A similar program might be very useful in Kentucky. I would be very interested in seeing a copy of the report of the Vermont meeting.

Sincerely,

Harry M. Snyder
Executive Director

John C. Hoy
President
New England Board of Higher Education
45 Temple Place
Boston, Massachusetts 02111

HMS:tkh

SU[illegible] [illegible]RNAL
LEWISTON, ME
S. 45,000

MAR 23 1986

NEW ENGLAND NEWSCLIP

Educational value

NEBHE

An investment in higher education is an outlay that will be repaid many times over in a more robust economy and an improved standard of living for Maine people. The importance of a state's higher-education system to its economic development can hardly be understated.

Last month, the New England Board of Higher Education, in a special policy briefing for Maine legislators, emphasized the education-economy link in New England and in Maine.

The board's president, John C. Hoy, told Maine lawmakers that higher education is the "rock bed" of the New England economy. He described New England as "blessed by a highly intelligent, professional work force" and maintained that the level of education in the region "is the primary reason for the turnaround in the New England economy."

Maine, however, ranks last among the New England states in the proportion of college and university graduates in the population. And, perhaps more telling, it ranks below the national average in the same category. The proportion of college graduates nationwide is about 16 percent; in Maine, 14 percent of the population has completed four or more years of college.

But what do these kinds of statistics mean in terms of career opportunities available to Maine's young people or advancement opportunities for those already in the work force? What do they mean for the future of children born in Maine?

Here is one analysis: According to Melvin H. Bernstein, project director for the U.S. Department of Education's Fund for the Improvement of Post-Secondary Education, substantial underenrollment in higher-education programs in Maine compared to the rest of the nation "makes the state overly dependent on an educated work force from out of state. Maine needs to grow its own professionals and knowledge-workers if it is to hold its own with the rest of New England."

In 1980, Maine natives made up three-quarters of the state's labor force. But only half of all workers with bachelor's degrees and somewhat less than half of workers with graduate degrees were natives.

Workers with graduate degrees, it should be noted, are paid twice as much as all other workers combined. A majority of these high-wage earners are from out of state.

Sixty-six percent of the master's degrees awarded in Maine are in education; there is a need for master's degree programs required for professional advancement in fields such as business administration, engineering and social work.

It does no good to rant and rave about the high-paying jobs and top positions going to out-of-staters if the state is failing to develop individuals with the technical and management skills necessary to hold down the more lucrative jobs.

Importing talent from out of state can be a time-consuming and extremely expensive proposition for companies. Most would probably prefer to recruit within the state, but find the pool of educated workers inadequate to meet their needs, and so are forced to look elsewhere to fill job openings.

To change the situation requires a change in attitudes. The fact that Maine youths have lower aspirations than their counterparts in other states in the region has been documented and discussed at length, but thus far no one seems to have come up with a strategy for upgrading those aspirations.

Parents and teachers are the key to raising expectations. If parents play down the importance of education, children will most likely lack the motivation to make the sacrifices necessary to earn a college degree.

But even when students want to become educated, if access to undergraduate and graduate programs is limited or if a college education is prohibitively expensive (as opposed to being expensive, but financially feasible with sacrifices on the part of the student and his or her family), then Maine will continue to have a lower-than-average percentage of college graduates in the population.

One way the state could help would be to increase the amount of financial assistance available to students with the academic qualifications but not the financial resources to attend college.

The university system also must make sure that Maine people have access both to undergraduate and graduate programs. Particularly important, in the words of NBHE's Hoy, are "targeted professional opportunities at the master's level in the job-generating fields . . . aimed at the needs of a work force that must upgrade its skills if it is to compete successfully in a knowledge-intensive regional economy."

One of the dangers of concentrating graduate programs at the University of Maine at Orono, as has been suggested, is that people in southern Maine may be denied those "professional opportunities."

To ensure that Maine people will have the skills to take advantage of higher-level employment opportunities in their own state will require a rethinking of priorities.

Part of that rethinking involves parents and communities, which must come to regard education as a goal worth seeking. Another part involves increased commitment at the state level to funding higher education. Both parts are necessary if Maine does not want to fall behind economically.

KENNEBEC JOURNAL
AUGUSTA, ME
D 18,815

FEB 20 1986

NEW ENGLAND NEWSCLIP

Survey gauges attitudes toward higher education

By KARLENE K. WASHBURN
Staff Writer

AUGUSTA — Maine legislators were told Wednesday they should be thinking about pumping more money into higher education, particularly for specific programs to meet the current demands of the state's economy.

The legislators said they might be more receptive to raising the ante if they had a better idea of what goes on in higher education circles.

"The only time I ever see anybody from the University of Maine is when they come before the Appropriations Committee or when nominees for the Board of Trustees come to us to approval," said Rep. James R. Handy, D-Lewiston.

Handy, a member of the Joint Standing Committee on Education, told members of the New England Board of Higher Education that he feels "impotent dealing with university issues."

"And if we do anything to regulate, we're accused of interfering with academic freedom and the whole nine yards," Handy said.

Members of the board were in town to discuss the results of a legislative survey gauging attitudes toward higher education throughout the New England states. Similar meetings have been held in the other five state capitals.

Taking a page from the Report of the Visiting Committee to the University of Maine, some legislators complained the university is so lacking in direction and communication that it's hard to know just what the college is doing.

They also suggested legislative leadership invite university officials to address the Legislature, even though state law requires an annual report from the university chancellor.

"If we gave an industry the appropriation we give the university and saw as little of that industry as we do of them, it would be amazing," said Senate Minority Leader Thomas Perkins, R-Blue Hill.

The complaints finally prompted Melvin Bernstein, project director of the NEBHE legislative study, to say, "UMO should communicate better with the public and with the Legislature" if the needs of Maine's economy are to be met.

In discussing the survey results, Bernstein said 98 percent of the legislators believe higher education is important; but less than half think education is as good in Maine as it is in New England in general.

Nine out of 10 said better information is needed from academia to judge the effectiveness of tax revenues for education.

Bernstein listed a number of strengths and weaknesses the survey revealed about Maine. Tuition at the University of Maine, $1,545 for 1985-1986 for resident students, is among the highest of state universities nationally.

Yet scholarship aid is the lowest in New England and one-sixth of the national average. And Maine ranks 35th in the amount it spends on education.

But it is fifth nationwide in the increase in appropriations in the past few years. Since 1956, funding has risen from $3 million to $100.9 million.

The state ranks seventh in the number of high school graduates, but has the lowest number of college graduates in New England. It ranks 20th in the federal contracts and grants brought in by college faculty.

NEBHE President John Hoy suggested college graduates are being trained for the wrong things.

"More attention must be paid to specific, technical programs that are available," Hoy said, such as computer science, engineering and business. Fully 66 percent of the master's degrees in Maine are in education, he said.

Maine simply doesn't produce its share of MBAs and advanced degrees in engineering, compared to the rest of New England, Hoy said.

He also charged that Maine is a "one institution system," with 97 percent of public research and development funds going to the Orono campus.

"The potential for other centers of excellence is a policy question that must be addressed," Hoy said.

He predicted higher tuitions and cuts in federal grants will present a real struggle for a tax-poor state like Maine. The Gramm-Rudman law will mean 25 to 30 percent in federal grant cutbacks, he said.

Said Bernstein of the state's commitment to education, "Is this what you want? Is this what you need? It's not a question of need, but where to get the best return on the investment in education."

"This is just the beginning of a large battle for building a strong higher education system," he said.

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LEWISTON JOURNAL
LEWISTON, ME
D. 13,692

FEB 28 1986

NEW ENGLAND NEWSCLIP

Job-making degrees needed, educator says

By J. BARRY MOTHES
Journal Staff

NEBHE

Calling higher education the "rockbed" of New England's economy, the Boston-based New England Board of Higher Education has told Maine legislators the state needs to produce its own professionals and knowledge-workers if it is to hold its own with the rest of the six-state region.

"Maine must develop specific, degree-specific degree programs in business administration, engineering, and computer sciences if the state is to succeed in creating the "basic building blocks for economic development," said NEBHE President John C. Hoy during the special policy briefing at the State House today.

Melvin H. Bernstein, a project director for the U.S. Department of Education, said Maine's public higher education suffers from substantial under-enrollment, which makes the state overly dependent on an educated work force coming from out of state and makes the state unable to rely on the kind of tax-based support for higher education that economic growth could provide.

According to Bernstein, Maine ranks below the national average and ranks last in New England in the proportion of college and university graduates in the population. In contrast, Connecticut has the highest proportion and has the highest tax revenues per resident among the New England states.

NEBHE, a congressionally authorized non-profit organization, "works to encourage cooperation and efficient use of resources among New England's colleges and universities," according to NEBHE spokesman John Mac Lean.

"We're asking legislators to make it possible for targeted professional opportunities at the master's level in the job-generating fields," he continued. "That will create the tax base that Maine needs to strengthen higher education. More people working and paying taxes creates the base to fund higher education."

"It very clearly stymies our state's economic growth when we're unable to produce students who can do well in a post secondary setting," said Sen. N. Paul Gauvreau, D-Lewiston, at today's session. Gauvreau feels the intensive assessment and reform planned for grades one through 12 in the near future can change that.

"We're not going to attract the industries unless we can offer a better-trained labor pool," said Gauvreau. "I think Lewiston-Auburn is a case in point. We have to be diligently diversifying our economic base if we want better-paying companies to locate here. They won't do that unless we refine the skills of our labor force."

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WINTHROP ADVERTISER
WINTHROP, ME
W. 4,837

FEB 26 1986

NEW ENGLAND NEWSCLIP

LEE'S LEGISLATIVE LINES

NECH1

At a recent meeting with the New England Board of Higher Education some interesting comments and statistics were forthcoming. In the opening remarks it was stated the railroads were the key to New England's economy in the period from 1850 to 1900; the key between 1900 and 1950 was the automobile; and from 1950 to 2000 it will be the knowledge industry.

New England educators and many citizens claim that our states contain the best higher education institutions on the face of this earth. It is further agreed that the economy of New England is greatly enhanced by our schools. In recent years Massachusetts has moved from 50th to 30th in state governments' contribution to schools of higher learning and they have tripled their student aid.

New England is involved in the greatest number of reciprocal agreements among various institutions compared to any other part of the United States. Maine, in 1984, had 452 students come to our schools of higher learning and 349 of our students attended out of state New England schools, all under reciprocal agreements accounting for an average saving of $2451 per student. For example a popular program taken by Maine students is Pharmacy at the University of Connecticut or the University of Rhode Island. Forestry is a popular program taken by out of state students at the University of Maine.

A recent Bureau of Census statistic revealed that Maine is 7th in the United States in public welfare expenditures and 35th in education including K through 12 and higher education. Wouldn't we be better off spending more for education preparing our young citizens for a life's work which in turn would automatically reduce the need for public welfare funds?

Representative Lee Davis

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FAIRFIELD CITIZEN NEWS
FAIRFIELD, CT
[illegible] 13,000

FEB 12 1986

NEW ENGLAND NEWSCLIP

Fairfield U included

Higher ed importance, needs cited by officials

NeBHE

By DANIEL HATCH
Connecticut
State News Bureau

HARTFORD — The growth of the area's colleges and universities has helped fuel the economic development of New England and is a vital component of the region's future economic strength, members of the New England Board of Higher Education told a group of 55 educators and legislators this month.

"The growth of higher education has caused a major shift in the structure of the economy in the region and the state," board President John Hoy told the group.

Education is the foundation of the "new economy" that grew out of the loss of manufacturing in New England following World War II, and should be given credit for the bringing the area the lowest unemployment and one of the highest per capita incomes in the nation, he said.

William Schwab, president of Norwalk Community College, which has an enrollment of more than 3,500 students in business and technical skills, agreed. "We have more trained personnel. And with more trained personnel, that helps the region," he said.

"It would be hard to overestimate the importance of higher education at any level," said the Rev. Christopher Mooney, academic vice-president for Fairfield University. He said it is important for the development of any culture and allows people to enter the working world at a higher level and contribute more.

And Leland Miles, president of the University of Bridgeport, said a university like his can be an "enormous stimulant" to the area's economy. "You have to have within a region some kind of academic dynamo." He said his school has helped promote both small businesses and high-tech industries through its entrepreneurial and industrial research centers.

Educators stressed, however, that continued economic growth depends on continued and increased investment in public higher education, citing Connecticut's poor standing in that respect.

"There is an imbalance of funding for higher education in Connecticut," said Melvin Bernstein, a researcher for NEBHE. Despite an excellent system of private institutions, public colleges and universities are "substantially underfunded," he said.

Figures provided by the board show that the state ranks 49th nationally in spending in proportion to its per capita income. Bernstein said Connecticut ranks 50th nationwide in the percentage of students enrolled in public colleges and universities.

Miles said that private institutions also should be included in the funding picture, pointing out that the reputation for well-endowed private schools is created almost entirely by a few well-endowed schools such as Yale and Wesleyan universities. Although the public sector deserves to receive more funding, he said, private schools need money too.

"In a democracy, a strong public university system is critical. But it needs to be supplemented by a far greater support for private institutions than is now the case."

Fairfield's Mooney agreed, saying the danger in raising funding levels for public institutions is that private schools will be neglected.

"There are values in private education that you don't have in public education. And there are values in public education that you don't have in private. You have to do both."

State Sen. Anthony Truglia, D-Stamford, said the figures on the current level of state funding for public colleges and universities were "enlightening" to him. The ranking Democrat on the General Assembly's education committee said he will ask the committee to look into the situation.

But the legislator predicted a "real skirmish" later this year as federal cutbacks put enormous pressure on state revenues. "I hope at that time that [funding for higher] education survives."

But it is the graduates of those institutions that make the biggest difference in the region. New England, which contains only 5 percent of the nation's population, produces 7 percent of its graduate medical students, 8 percent of its Ph.D.'s, 8.6 percent of its law school graduates, 10 percent of its engineers, 12 percent of its chemists and 13 percent of its physicists.

And Hoy said the state leads the nation in putting those graduates to work.

"In Connecticut, a higher proportion of the working public are graduate engineers, graduates in science, skilled technicians and technical workers than anywhere in the country," he said.

But that record has to be maintained by continued public investment in higher education, Hoy told the group. "A leadership state cannot rest on the laurels of its accomplishments."

Some of that investment should come in the retraining of workers displaced by the loss of manufacturing jobs and the continued education of those with increasingly technical jobs, Hoy said.

"The state has a higher proportion of part-time students than any state in New England," he said. More than 40 percent of the state's students are part-time.

Those figures are even more prominent at Norwalk Community College, where 80 percent of the students are part-time and the majority of classes are held at night and on weekends, Schwab said. Many of the college's students are business professionals learning new skills, such as data processing, or women training to re-enter the workforce, he said.

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BANGOR DAILY NEWS
BANGOR, ME
D. 83,609

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MAR 6 1986

NEW ENGLAND NEWSCLIP

Editorials

Yardsticks needed

NEBHE

Maine lawmakers want more information about their university system. They especially want to know more information about how it contributes to economic development. They also would like annual reports on student proficiency.

Those were among the conclusions of a poll by the New England Board of Higher Education. There's a lesson here for harried UM trustees who are trying to change their image with the Legislature. The lesson is that goals are nice, but results are better.

The discussion this week in a meeting between UM officials and members of the Education Committee centered around the perennial question of goals. That's well and good. But there are only so many ways to restate the goals of higher education. The goals already stated in various UM mission statements are perfectly adequate and very similar to goals of other universities across the nation.

The real problem comes when it's time to measure the results of goals. That's where the university has fallen down. It has never provided adequate yardsticks for measuring the goals it already has. For example, when Richard Barringer, director of the State Planning Office, contends (hyperbolically, we hope) that he "cannot think of a single issue in the last decade to which they (the University of Maine) have made any constructive contribution," can UM officials refute him? "Public service" is an important goal of any university. Is anyone measuring the results of efforts to meet this goal?

Can anyone answer specifically the questions lawmakers have posed in the NEBHE poll about "student proficiency," or how the state's investment in higher education pays off in the state's economy?

When trustees ask for an increase in their share of the General Fund from the current 8 to 15 percent, as they did last fall, they should spell out how the money will be used and how lawmakers will know that this massive infusion of taxpayers' dollars is accomplishing anything. The same goes for the $15 million that is now being requested, with the blessings of the Visiting Committee to the University of Maine.

Instead of formulating a new set of goals, trustees and lawmakers should work jointly to come up with some yardsticks for measuring the goals that already exist. Then they need to make an annual report to lawmakers showing how they met the goals

176

Forging New Legislative Alliances: Higher Education in the State Capital

A model program in New England enhances state government relations by informing legislators about higher education's impact on state economies.

MELVIN H. BERNSTEIN

"Sure we've made a lot of progress but not enough. The communications are still too fragile," said John Tucker, the House Speaker of New Hampshire.

"You mean too cautious," replied his companion.

"Call it what you will—the message really hasn't gotten through yet."

"I agree. The new candor is paying off but we still have a long way to go."

This wasn't a political consultant the House Speaker was talking to. It was the president of the New England Board of Higher Education (NEBHE), John Hoy. They were having a nightcap in a hotel lounge midway between Boston and Concord, New Hampshire. Earlier at a legislative hearing Tucker had commended the new collaboration between higher education and the Caucus of New England State Legislatures. Now they were meeting to plan the next policy briefing for Vermont.

It's taken five years to forge a focused regional alliance between higher education and the state legislatures—three years of planning and organizing, two years of testing.

It's ironic that the new alliance has appeared first in New England, historically a stronghold for private colleges and universities. New England has nearly twice as many private institutions per capita as the rest of the country. The West, on the other hand, is known for its strong public institutions of higher education and close ties between higher education and state legislatures. The need may simply have been greater for strengthening higher education's relations with legislators in the New England states.

Higher education and New England are virtually synonymous for several reasons. New England has a long history as the home of prestigious colleges. The institutions have made many contributions to the distinctive quality of life in New England. Most important, perhaps, is the fact that higher education has a greater impact on the economy of New England than on any other region of this country.

The birth of a model program

In a Summer 1984 *Educational Record* article, E. Terrence Jones calls for higher education to "revamp its political efforts" in order "to maintain and increase its financial support from the states." Jones contends that higher education should support increasing state revenues instead of asking for a bigger slice of the same pie, and that this can be done by "stimulating economic development." He urges replacing the old kind of go-it-alone university lobbying with a new style of university political relations, one based on an "organized effort to understand better what the state thinks about higher education and to explain more effectively academe's contribution to the polity."

What Jones persuasively argued for in 1984, NEBHE successfully proposed to the Fund for the Improvement of Postsecondary Education (FIPSE) in 1983. The project started quietly and deliberately without fanfare and gained momentum as it moved across the map of New England state capitals from Concord to Providence to Boston to Montpelier during the next two years.

The model program is supported by a three-year grant from FIPSE for the purpose of forging a new way of doing business between higher education and legislators—one built on trust, collaboration, and mutual sharing of resources. With one more year to go on the grant, the early results are promising. On August 29, 1983, *The Christian Science Monitor* commented on the new plan: "If the educate-the-lawmakers plan works for higher education in New England, it should work elsewhere and on other levels. . . . That's not all the schools need but it's an excellent beginning."

The grant project uses informed analysis of comparative data to educate the legislators on the connection between public investment in higher education and economic development. NEBHE works with the lawmakers throughout the year to increase their understanding of the impact of higher education on the economy from state, regional, and national perspectives.

New England accounts for 50 percent more colleges and universities per capita than the nation as a whole. Moreover, its regional market share of all higher education spending in the nation is 40 percent greater than its share of Gross National Product.

NEBHE and the New England Legislative Caucus jointly sponsor the project. John Tucker and John Hoy are the co-chairs. The Caucus even moved its office into NEBHE's building in Boston to benefit from shared research, reduced costs, joint conference planning, and information dissemination. A Legislative Advisory Council was established, comprising the elected leaders of each New England legislature and other key legislators from committees such as education, finance, and appropriations. Tucker appointed Carolyn Morwick, Caucus executive director for day-to-day operations, to coordinate the project with NEBHE.

A new departure

Why was the project undertaken? Historically, higher education's relations with lawmakers have been fragile, sporadic, and defensive at best. There was and is a need for better communication. But there's more to it than that.

Tucker is convinced that "New England's strong higher education sys-

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Melvin Bernstein is a senior fellow at the New England Board of Higher Education and is president of the Bernstein Group, Inc., a strategic planning consulting firm in Boston.

tem, both public and private, has enabled our economy to remain vibrant and strong." He is concerned, however, about the competition from other regions that threatens New England's future economic stability. His response is the legislative alliance with higher education "to focus on what we have to do as a matter of public policy to ensure that New England's higher educational enterprise remains strong."

NEBHE's assessment of the strategic environment for colleges and universities found several fundamental shifts taking place. They all revolved around the economy and the financing of higher education:

- The federal share of higher education's current income reached 24 percent by 1969-70, held at roughly that level for a decade, and has been declining ever since—reaching a new low of 11 percent in 1983-84.
- The state share of current income continues to rise as the federal share of current income contracts.
- The Reagan Administration's federalism steadily divests Washington of funding responsibility for education and lodges it with the states, a trend likely to continue as long as the Administration stays in power.

Considering that federal, state, and local governments supply as much as 50 percent of all funds for higher education, and that the states account for nearly two out of every three dollars of the government share, state government is clearly the place to look for financial support in the future.

But how do you educate and inform 1,323 legislators in six New England states? The problem is made more complex because most New England legislators are notoriously underpaid, overworked, and understaffed.

Reorienting legislators

Many legislators knew about the impact of higher education on the quality of life and the economies of their local districts. Few, however, knew about the overall economic impact of colleges and universities on the states and the region. This data was not readily available.

The purpose of the project is to inform legislators about what they don't have time to learn for themselves about higher education. The FIPSE project relies on the following four basic methods to help focus legislative attention on higher education and its impact on the state economies:

1. *An attitude survey*. An opinion poll surveyed all 1,323 legislators: 705 responded. In addition to measuring their attitudes, the poll sought to discover what legislators knew about higher education and economic development, what they wanted to know, and what they needed to know. The findings, presented state by state as well as for the entire region, were published in a report entitled *Renewing Excellence*. A veteran Connecticut state senator remarked that the questionnaire brought to his attention higher education as a resource he had not used adequately. Why, he says, "should we overlook this area of information and assistance? I intend to start some inquiries today."

2. *Policy briefings*. The project held in-depth briefings for legislators in the State Houses of Vermont, Massachusetts, Rhode Island, and New Hampshire; Connecticut and Maine are scheduled for 1985-86. All attendees receive extensive data and tables tailored to the particular state in support of the presentations. The value the states place on this collaborative venture is suggested by the fact Governor Michael Dukakis of Massachusetts loaned his own press conference room to NEBHE for the briefing. Preliminary evaluations taken after the meetings show nine out of ten legislators evaluate them as "a helpful learning experience" and would like to see the briefings held annually.

3. *Publication of the proceedings*. After each state briefing, the project publishes the highlights and principal data and gives a copy to all New England legislators and governors. These reports give comparative state, regional, and national figures for population growth, the labor force, education level of the population, federal funds awarded, and model educational programs.

4. *Reports to the legislative advisory council*. The project periodically provides evaluation reports to the Council to help future state meetings. At one meeting, Massachusetts State Senator Gerard D'Amico said, "It's not enough to conduct a very interesting poll and report the findings. We have to develop strategy to market this information to support our aims—the data supports things we're trying to do in Massachusetts and the rest of New England as well." The project published the survey data subsequent to that meeting, and released it systematically to the public.

Creating a warmer climate

What results flow from the New England legislative project? The benefits cannot be counted simply as wins or losses as is the case of lobbying for or against bills. Rather, NEBHE's partnership with the Caucus has created a more positive climate for higher education in the state legislatures.

The project has raised legislators' awareness levels by reviewing higher education's contributions to their economies and states. Legislators from all committees, not only those from education committees, now pay more attention to higher education's message.

The project not only gives legislators new information but provides them with data in a comparative format. They can measure their states against the rest of the New England states and national norms. John Hoy believes, "The beauty is legislators know they can rely on the information. The emphasis is on public policy implications for the state, not simply self-interest of an individual."

As Morwick of the Caucus puts it, "The ongoing process results in higher education becoming more understandable and appreciated by legislators." She says, "The positive climate created by the interest shown in state legislators and the process of informing them has probably led to their devoting more money in budgets for higher education because they can see the benefits more clearly." In other words, legislators now see higher education as an investment rather than an expense.

What can higher education organizations do if they're interested in drawing on the New England Board's legislative model? Of course, the political culture of each state determines the opportunities for collaboration. Ideally the project is most suited to regional or statewide organizations representing colleges and universities. However, sub-regions of a state can profit as well. Any group of colleges in a sub-region can collectively organize and use their resources to better inform and assist legislators. But there should be a central administrative unit that speaks for the colleges and has the resources to apply to legislative use.

It's not easy to build a close working relationship with legislators. You have to overcome apathy, competing interests, and time pressures. The New England venture shows, however, that it can be done. And it is certainly proving worthwhile.

POSTSECONDARY EDUCATION
FOR A
CHANGING ECONOMY PROJECT

HIGHER EDUCATION AND THE STATE: NEW LINKAGES FOR ECONOMIC DEVELOPMENT

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THE BERNSTEIN GROUP, INC.

AND

THE NEW ENGLAND BOARD OF HIGHER EDUCATION

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HIGHER EDUCATION AND THE STATE:
NEW LINKAGES FOR ECONOMIC DEVELOPMENT*

OVERVIEW

Linking colleges and universities to economic development is one of the most powerful movements operating in American higher education today. Both the global and national economies have become knowledge-driven. Specialized knowledge has become the indispensable asset for future economic development. And it is in our universities where advanced knowledge in science, engineering, and technology is nurtured and concentrated.

The higher education-economic development movement has mushroomed across the country and spread overseas to industrialized nations and many developing nations as well, including China. There is now another movement afoot among American governors to broaden their present commitment to elementary and secondary education to encompass a new drive to strengthen the quality, contributions, and performance of higher educational institutions as priorities for the 1986 legislative year.

Governor Thomas Kean, taking office as chairman of the Education Commission of the States, told a state leadership audience in Philadelphia on July 26, 1985, improvement in the quality of college and university education will be one of his two top priorities for a three-year period, support for public school teaching the other. He spoke of the importance of listening to the higher education community and examining successful state practices but emphasized "above all, our purpose is to articulate a vision for the resurgence of American higher education." He called for preparation of an interim report early in 1986 to be ready for state legislative sessions and "practical suggestions for effective state action." Economic and national renewal, he contends, demand no less.

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Lamar Alexander, Governor of Tennessee, also chose education as one of his top priorities when he became chairman of the National Governors' Association on August 7, 1985. One of seven gubernatorial task forces he appointed on education is chaired by Governor John Ashcroft and is assigned to assess college quality and to tackle the knotty problem of developing effective methods of evaluating the results of postsecondary education. New criteria are now needed to enable governors and legislators to make comparisons of how well higher education is performing, assessing progress, and allocating resources consistent with state goals. Gauging the performance of public higher education is elusive at best without concrete indicators.

The astonishing surge of political and economic interest in our universities and the appearance in state after state of creative new research partnerships with industry are no fluke. This phenomenon is partly explained by economic conditions, partly by rapid fundamental changes in science, technology, and the world economy. For example, new technology has produced about 90 percent of all human knowledge in the sciences in the last 30 years alone. That knowledge will double again in the next ten to fifteen years.

It was not only dire financial straits that forced higher education to begin opening up to new economic partnership opportunities with business and industry in 1981. The pressures of severe inflation and recession account for part of it -- Reagan budget cuts and state government retrenchment compounded these financial problems; the increasing failure of campus revenues to keep pace with skyrocketing costs also contributed.

Even more telling perhaps were sweeping worldwide and national forces that shook a fragile infrastructure of higher education out of its lethargy and defensive posture into a series of innovative high technology partnerships and joint ventures with industry and government. These forces included:

- The arrival of the knowledge economy. Knowledge industries today account for over 50 percent of the American Gross National Product. One out of every two workers is employed today in either the collection, organization, or dissemination of information.
- In an economy where knowledge has become a critical economic resource, the university lodged at the center of the knowledge process becomes the fuel that feeds the engine of national economic productivity.
- Productivity research establishes that since 1929, human capital has contributed more to American economic growth than financial capital, machines, or factory plants. Knowledge, education, and training have become the essential tools for developing human capital.
- The United States no longer dominates the global economic system as it did from 1945 to 1970. The United States has already lost world market leadership in such critical industries as autos, steel, machine tools, and consumer electronics.
- Acute international competition confronts 70 percent of all American goods sold in this country or abroad.

New England was one of the first regions to see its economic future tied directly to higher education. It suffered badly during the recessions of the 1970's. It has a greater concentration of colleges and universities than other regions of the country -- by the late 1970's it had become a knowledge-intensive economy, ready to redefine and redirect its aging and decaying economic infrastructure.

Given the Reagan Administration's philosophy of reducing the power and size of national government and restoring power to the states, the federal government is no longer the place to look for leadership and new initiatives in higher education-economic development. The governors' initiative in higher education is a new departure -- they instead, of federal leaders, define the pressing issues for higher education. No longer do the President and Congress lead the way as had been the case for so long with the Morrill Act of 1862, the G.I. Bill of 1944, the National Defense Education Act of 1958, and the Higher Education Opportunities Act of 1965.

The states are not only the largest financial source of revenue for colleges and universities, they have been steadily increasing their share, while the Reagan Administration battles in Congress to cut back even further the federal share of funding support. It becomes logical then to look to the governors for energetic leadership since by virtue of their office and the resources they control they are the most visible, powerful, unifying leaders in the states.

Nevertheless the governors have yet to develop a vision for higher education, as Governor Kean concedes, nor even a specific agenda. Nor has prime public attention been focused yet on higher education. The governors and their constituents have been preoccupied with the quality of education in the public schools. Now that the wave of interest has peaked, they are in a position to turn next to the higher education resource, a system unrivaled by any other in the world in magnitude of investment, size, and diversity.

Among industrialized powers, American enrollment in college relative to population nearly doubles that of its closest competitor, Canada. Take the adult population, for example; almost 32 percent of American citizens 25 or older have at least some college education compared with 17 percent of Canadians and 17 percent also for East Germany, heading the list of Communist countries. In round numbers for the United States:

- three of five high school graduates enroll in college;
- 12 million students are enrolled in 3,300 colleges and universities;

- colleges and universities will spend $100 billion in 1985-86 for their operating budget, accounting for three percent of GNP; and
- colleges and universities employ two million people.

But where do state legislatures fit into the picture? State action requires their support. They pass the budgets which make possible state programs. Nevertheless, despite its wide array of formal powers, because of the way it is organized legislative leadership is divided, fragmented, and less visible than that of the governors. This paper turns next to higher education's connection to state legislatures and how a new venture underway in New England enlarges opportunities for regional economic development.

Following the New England case study is a review of four notable partnerships between higher education and the state in Georgia, Iowa, Pennsylvania, and Massachusetts. The final section discusses the broadening role of higher education in the economy and its newer responsibilities to state legislatures.

A NEW DEPARTURE

The New England Board of Higher Education (NEBHE) is an independent corporate creature of the six states of the region, created by the six governors in 1955, including Abraham Ribicoff of Connecticut, Edmund Muskie of Maine, and Christian Herter of Massachusetts. It is a Compact organization provided for under the Constitution of the United States, approved by the state legislatures, and ratified by Congress. Its interstate mission is to pursue the interests of higher education for the citizens of the New England states in medicine, science, technology, and other professional fields. Legislators from all six states serve as Board members.

New England's strategic plan for higher education and economic development is found in the Threat to Excellence report of the New England Board of Higher

Education's Special Commission on Higher Education and the Economy. Supporting documents and texts of the plan include the Prospectus, called by David Warsh, columnist of the Boston Globe, "the best case I've read yet for support of higher education in New England;" also three books published on Business and Academia, New England's Vital Resources: The Labor Force, and Financing Higher Education. A policy paper prepared for the Legislative Office for Research Liaison of Pennsylvania's House of Representatives calls Business and Academia "an excellent idea and strategy book" and says Financing Higher Education is "Highly recommended for perusal in terms of an excellent overview on the subject of higher education and economic development issues for state policy."

Two central questions New England's strategic plan addresses:

- Why should institutions of higher education want to help the economy of New England?
- What do these institutions do to assist the economy of the region?

The plan and accompanying texts document:

- The contributions of higher educational institutions to economic development in New England;
- A precise definition of the economic and social dimensions of the industrial mix of the 1980's and its significance for institutions of higher education; and
- Identification from the lessons and experiences of the 1945-80 period of factors relevant to new problems confronting state and regional economic policymakers and the ways institutions of higher education may address them.

The Threat to Excellence recommendations called for formation of an ad hoc committee of state legislators to hold public hearings in all six states on the issues raised in the report. Out of their call to action came the idea for a new initiative between the New England Board of Higher Education and the New England state legislatures. The issue would be higher education and economic development -- the theme would be increasing the return on the public investment in the region's colleges and universities.

The result is a new focused regional alliance forged between higher education and the state legislatures that has been five years in the making--three years of planning and organizing, two years of testing.

It is ironic that this new alliance has appeared first in the East, historically a stronghold for private colleges and universities not dependent on the state legislatures for support. New England has nearly twice as many private institutions per capita as the rest of the country: 49 percent of the region's students are enrolled at private campuses, 2 1/2 times greater than the national private enrollment level of only 20 percent.

The development of such an alliance might have been expected to appear in the West which has traditionally been known for its stronger public institutions of higher education and closer ties with state legislatures. The emergence of the legislative initiative in New England may simply reflect a greater need for strengthening higher education's weak ties with the region's legislators.

Higher education and New England are virtually synonymous. This is not only because of the long distinguished history of colleges and universities in New England and their contributions to the region's distinctive quality of life. It is because of both of these reasons plus the overarching fact that higher education has a greater economic impact in New England than anywhere else in the country.

FIPSE SUPPORT FOR NEW ENGLAND

The regional pilot project is supported by a three year grant from the Fund for the Improvement of Postsecondary Education (FIPSE) of the U.S. Department of Education. The purposes of the project are to better inform legislators about the significance of higher education to each state economy and the region and to better prepare legislators to make more informed judgments on issues concerning investment in human capital.

With one more year left of the grant, the preliminary results are promising, offering a new way of doing business between higher education and legislators--one built on trust, collaboration, and effective sharing of resources. The Christian Science Monitor commented on the new program on August 29, 1983, "If the educate-the-lawmakers plan works for higher education in New England, it should work elsewhere and on other levels... That's not all the schools need but it's an excellent beginning."

Coincidental with the development of the new project, E. Terrence Jones in an article for the Educational Record in the summer of 1984 called for higher education to "revamp its political efforts" in order to "maintain and increase its financial support from the state." Jones, Dean of Arts and Sciences at the University of Missouri-St. Louis, argues higher education should support increasing state revenues instead of asking for a bigger slice of the same economic pie and this can be achieved by "stimulating economic development." He urges replacing the old kind of go-it-alone university lobbying with a new style of university political relations, one based on an "organized effort to understand better what the state thinks about higher education and to explain more effectively academe's contributions to the polity."

What Jones persuasively argued for in 1984, NEBHE 1200 miles away successfully proposed to FIPSE and quietly began in 1983. The Caucus of New England State Legislatures agreed to jointly sponsor the project with NEBHE. The Caucus is the administrative arm of the region' six state legislatures, seeking greater cooperation and coordination of policy issues. The project started slowly without fanfare and began to gain momentum as it moved across the map of New England state capitals from Concord to Providence to Boston to Montpelier during the next two years.

THE STRATEGIC ENVIRONMENT

The time was ripe for a legislative project of this type. Historically higher education's relations with lawmakers have been fragile, sporadic, and defensive at best. The efforts at contact all too often have been limited to budget time. There was and is a need for better communications. But there is more to it than that.

In a speech to a policy briefing of New Hampshire legislators launching the pilot project in November 1983, Speaker of the State House of Representatives John Tucker said, "New England's strong higher education system, both public and private, has enabled our economy to remain vibrant and strong." He is concerned though about the competition from other regions that threatens the region's future economic stability. He sees the legislative alliance with higher education as an opportunity "to focus on what we have to do as a matter of public policy to ensure that New England's higher educational enterprise remains strong."

NEBHE's assessment of the strategic environment for colleges and universities found several shifts taking place. They all revolved around the economy and the financing of higher education:

- the federal share of higher education revenue reached 24 percent by 1969-70, held at roughly that level for a decade, and has been declining ever since--reaching a new low for the past 25 years of nine percent in 1984-85;
- the state share of higher education revenue is rising as the federal share dwindles; and
- the Reagan Administration's philosophy of federalism requires divesting the national government of funding responsibility for education and lodging more of it with the states, a trend likely to continue for the remainder of the President's second term in office.

Considering that federal, state, and local government together supply as much as 50 percent of all higher education revenue and the states account for two out of every three dollars of government's share, state government is the place to look for greater financial support.

NEBHE believed it could work closely with the governors in the future--the governors are generally well-informed on the policy and political significance of these issues and have substantial resources to draw on. But how to educate and inform the 1,323 legislators in six New England states? Few legislators were well versed about education, let alone higher education; most lacked the time to devote to it and deferred to colleagues who specialized in the higher education field.

TECHNIQUES TO INFORM LEGISLATORS

In carrying out the project, NEBHE relies on four basic techniques to inform and help focus legislative attention on higher education and its impact on state economies. The approach is to do for legislators what they don't have time to do for themselves as far as higher education is concerned. A baseline survey was taken of legislators; policy briefings are held; publication of proceedings are mailed to all 1,323 legislators; and legislative advisers are used.

Many legislators knew about the impact of higher education on the quality of life and the economies of their local districts. Few, however, knew about the economic impact of colleges and universities overall on their states and the region. The data were not readily available. Hence, the development of the four basic techniques:

- An opinion poll taken of the region's 1,323 legislators on their attitudes about higher education's role in economic development. Over 50 percent responded. Two major findings were that 9 of 10 legislators want academia to furnish better data to government; three-quarters believe communications between legislators and higher education are inadequate.
- Policy briefings held in each of the state capitols. Extensive data and tables tailored to the state at hand are provided to legislators attending. Evaluations taken after the meetings show the great

majority of legislators view the briefings as "a helpful learning experience" and would like to see them held annually in the future.

- Publications of the proceedings of the policy briefings. The Appendix contains a representative example of one of the six publications, that of the Vermont seminar.
- Periodic meetings of a Legislative Advisory Council. The Council is an advisory group of legislative leaders from the six states created for the three year term of the grant. Plans are reviewed with the legislative advisers from the six states, and evaluations of the policy briefings and other activities are reported to them for their advice and counsel.

CREATING A MORE FAVORABLE CLIMATE

One may rightfully ask what results flow from New England's legislative project? From an appropriations point of view, this is what the record shows. Starting from a comparatively low base of public support for higher education in the New England states, Massachusetts' large percentage increase in appropriations in the past two years ranks it fourth in percentage increase among all states nationally. Maine has followed suit in stepping up appropriations for higher education, ranking fifth in percentage gain, followed by New Hampshire in 17th place, Connecticut 19th, Rhode Island 38th, and Vermont finishing 39th.

Still, it should be recognized that the benefits do not simply translate into cause and effect patterns for dollars appropriated. The legislative process is certainly more complex than that. Rather, NEBHE's partnership initiative with the Legislative Caucus creates a more positive climate overall for higher education in the state legislatures. Access is provided, attention is focused on issues, and dialogues developed.

Legislators have had their awareness and information levels raised by being shown the concrete economic contributions of higher education to their states. Legislators from all committees, not just those from education committees, now pay more serious attention to higher education's message. Not only are legislators given new data and analyses of trends but this information is provided in a comparative format -- measuring how their states compare with the rest of the New England states and national norms.

As Carolyn Morwick, executive director of the Caucus puts it, "the ongoing process results in higher education becoming more understandable and appreciated by legislators." She says "the positive climate created by the interest shown in state legislators and the process of informing them has probably led to their devoting more money in budgets for higher education because they can see the benefits more clearly." In other words, more legislators now see higher education as an investment in long-term economic development rather than as merely another budget expense for the state.

What can other institutions of higher education do if they're interested in drawing on the New England Board's legislative model? Of course the political traditions and conditions of each state determine the opportunities for collaboration. Ideally the project is most suited to regional or statewide organizations representing colleges and universities. Either existing organizations can be used, as has been the case with NEBHE, or new groups can be organized for that purpose. However, sub-regions of a state can profit as well. Any grouping of colleges in a geographic area can collectively organize and use their resources to better inform legislators about their community.

A word of caution though for other regions. Representative Irving Stohlberg of Connecticut, chairman of the Caucus of New England State Legislatures, says, "I'd be cautious in transferring conclusions about our higher education project to other regions. The project has more application in New England than elsewhere because of our strong tradition of higher education, cohesiveness and smaller distances to travel." While it is true that what works in one region may not work in another, other regions facing common problems will benefit from knowing what gave rise to the New England legislative model, what makes it work, and what effect it is likely to have in the future.

New England's strategic plan for higher education and economic development is long-term. No one expects the goals to be achieved quickly. The new legislative program helps to set the agenda for establishing objectives, defining the issues, and keeping the issues before the legislatures. New Hampshire's House Speaker Tucker says, "the Threat to Excellence plan should not be a one-time shot but an ongoing issue for economic survival, one that has to be fine-tuned and constantly kept before the legislatures." The high turnover every two years of state legislators means there are many new faces to inform as well as a continuing pool of legislators spread thin over an endless array of issue areas. Keeping higher education before the legislators as a resource to be tapped for economic development rather than as a special pleader is the mission of the New England project.

STATE-HIGHER EDUCATION INITIATIVES

A telephone survey of national and regional organizations reveals that, outside of New England, no other region or state is pursuing a higher education initiative aimed at state legislators. The importance of legislators to the budget and policy-making process is obvious but it is the governors who are monopolizing attention. State legislators have yet to be awakened to their potential for leadership, assessment, and energy in guiding and monitoring higher education's contributions to state economic development.

Linking colleges and universities to economic development is the hallmark today and for the immediate future of every state in America, every industrialized country in the world, and many developing nations. A dazzling array of research and development (R&D) partnerships centered in universities has been initiated in virtually every state in the union -- aimed at private industry and supported, in part at least, by the state. This is the greatest mobilization ever of America's higher education institutions in peacetime for purposes of economic development.

The higher education-economic development movement is rooted in the period 1973-1982 in the worst peacetime world economic conditions since the great depression of the 1930's -- and further in the restructuring of the global economy in which the United States remains a leader but no longer dominates as it once did. Quality and cost, driven by technological improvements, now dominate world markets.

Three important new studies evaluate a wide array of R&D partnerships begun since 1980. James Botkin and Dan Dimancescu, technology consultants and co-authors of Global Stakes and The Innovators, have written an excellent analysis of 15 leading research consortia in a forthcoming report funded by the Carnegie Corporation of New York on America's New Experiment: R&D Consortia. Their study, which will be published by Ballinger Publishing Company, judges North Carolina's microelectronics center and Stanford University's Center for Integrated Systems as the strongest collaborative ventures and Massachusetts' Centers of Excellence project as the weakest. They find that research in high technology must be sustained for the long-term at a substantial level if it is to be effective, requiring a minimum commitment of at least 10 years.

Charles Watkins, professor at Howard University, wrote two comprehensive evaluations of high technology research partnerships in the states for the National Governors' Association in 1985, resulting from studies funded by the National Science Foundation. In his report on "Programs for Innovative Technology Research in State Strategies for Economic Development," Watkins concludes that a state's goals for technology must be set with regard for its own economic and demographic characteristics as well as its technological infrastructure. He finds state-initiated R&D programs contribute either to actual job creation through technological innovation or at least the image of a robust, progressive economy.

In "State Programs to Encourage the Commercialization of Innovative Technology," Watkins acknowledges that the short life to now of most of the initiatives prevents a rigorous comparative evaluation. Such programs, according to Watkins, appear to have stimulated economic activity and certainly create an optimistic outlook about the state's economic future. Nevertheless, one must be cautious about premature claims of success, the enthusiasm and self-promotion of the program's backers, and the uncertainty of bright projections about future results before a solid track record has been established. The phenomenal growth stories of the Silicon Valley and Route 128 are unlikely to be repeated in many places because of the huge technological infrastructure required, built up over decades of development. Nor has it been established yet that state assistance programs can produce the financial growth and markets achieved by private sector companies such as Apple Computer or Hewlett-Packard.

The third of these valuable new reports reviewing the mushrooming growth in high technology research centers is the Northeast-Midwest Institute publication on Partners in Growth: Business-Higher Education Development Strategies. This study reports that by the end of 1984, at least 44 states had established university-based research centers for high technology development. These programs and others described present a broad perspective on what universities can contribute to economic development, including: R&D technology transfer; informal university-industry information networks; universities as business consultants; university-run industrial extension services; and university-industry cooperative research. The inventory reflects a wide array of economic strategies to enhance business-university partnerships that contribute to economic productivity and competitiveness.

FOUR NOTEWORTHY PROGRAMS

Four notable partnership cases that either don't appear or receive only brief mention in the studies noted above deserve separate mention because of their originality, magnitude, or effectiveness.

First is the Ben Franklin Partnership in Pennsylvania which resulted from two years of preparation of a strategic economic development plan for Governor Dick Thornburgh. He rapidly implemented the plan with the support of the legislature not only to revitalize his state's economy but to move it away from excessive dependence on heavy manufacturing. The plan focused on the use of new technologies in basic industries, the spinoff of technological innovations for new business development, and emphasis on advanced professional services.

During its two-and-a-half years of existence, the Ben Franklin Partnership (BFP) has designated, after a competitive process, four Advanced Technology Centers encompassing the major public and private research universities in four regional centers of the state. In less than three years, Pennsylvania has created what Governor Thornburgh describes as the largest and most highly leveraged technological development program in the country. A total of $115 million has been committed, $29 million from the state and $86 million in matching support from the private sector. Up to April 30, 1985, the BFP Centers reported:

- 12 patents issued;
- $22 million raised in venture capital;
- 7,400 persons enrolled in Center training programs;
- $1.2 million won in Small Business Innovation Research awards; and
- 7,100 graduates of training programs.

A notable case little known beyond its own state and regional borders is that of the Industrial Extension Service (IES) of the Georgia Institute of Technology. IES's 13 field engineers each assist and provide technical information to an average of 13 counties and 480 companies. The program began in 1961 and was designated by the General Assembly of Georgia in 1975 as a part of the state's official productivity center at the Georgia Institute of Technology.

The international consulting company of Arthur D. Little evaluated Georgia's Industrial Extension Service and found it was responsible for producing $22 in economic benefits for every dollar the state invested. The field engineers help companies become more efficient and save costs by solving tough technical problems such as plant layout, pricing systems, marketing, and compliance with government industrial regulations. The field engineer operates much the same as a county agent working with farmers under the federal government's Agricultural Extension Service, which has been remarkably successful in spreading new technologies and helping American farmers become the most productive growers the world has ever seen.

IES assistance is primarily provided for short-term projects at no cost to the companies but can be extended by contract. The payoff to Georgia's economy is in jobs: creating them, keeping them, and making them more efficient. Though serving large and small companies alike as well as county and local government, IES is aimed mostly at smaller companies because they account for 78 percent of all businesses in Georgia, employ 2/3 of all workers, and create 3/5 of all new jobs.

Georgia Tech's ability to generate the applied research so valuable to the manufacturing companies of its state can be seen from its latest ranking by the National Science Foundation as first in the nation among state-supported institutions of higher learning for engineering research and development expenditures. McKinsey & Co., a Big Eight accounting and management firm, concluded in a study last year of future economic prospects that "development of leading edge technology is essential to maintaining the rate of employment growth in Georgia and increasing the standard of living in the state."

One of the most successful partnership programs for the future is that of the Bay State Skills Corporation (BSSC) in Massachusetts. This independent corporation, established and partially funded by the Commonwealth of Massachusetts, has in the four years of its life attracted the participation of over 600 companies and 100 institutions of higher education. Nearly 8,000 people have been trained through BSSC programs. BSSC provides 50 percent of the funds needed; the other 50 percent is matched by industry, with colleges and universities used as contractors. For example, Simmons College trained 25 underemployed and unemployed women for entry-level professional positions as manufacturing system specialists. The biggest contributors to the program were Hewlett-Packard, Digital Equipment Corporation, Wang Laboratories, and five other high technology companies. Tufts University provided entry-level and advanced skill training for 31 biotechnology technicians, supported by six expanding biotechnology corporations, including Waters Associated/Millipore Corporation and the Dupont Company.

Other states seeing the great success enjoyed by the Bay State Skills Corporation have passed legislation based on the Massachusetts model. They include the Minnesota Job Skills Partnership, the Washington State Job Skills Corporation, and the Bluegrass State Skills Corporation of Kentucky.

Iowa, a leading agricultural state suffering from the depression in farming, has created a novel Industrial New Jobs Training Program for business and industry that uses special tax incentives to pay for customized training arranged at the state's 15 community colleges. The program pays up to 50 percent of the salaries of trainees for new and expanding companies engaged in production or interstate services. The purpose is to provide an economic development incentive for industry by lowering start-up costs, improving productivity, and enhancing profits.

Over 5,000 people have been trained since the program began in 1983. Training for new jobs has been provided for 203 new employees at Sara Lee, 968 at Greyhound, Inc., and 450 at Wal Mart Corp. Under legislation creating Iowa Jobs Training, no up-front grant or current state funds are used. Instead, financing is generated by the training certificates issued by the community colleges, authorized by the state, and sold in the financial market. Funds paid for the training certificates are used to finance the project and to reimburse the employer for part of the training cost. Repayment of the certificates is provided by a withholding tax credit of one-and-a-half percent of the wages of new jobs and is further backed by a portion of the property tax on new facilities and equipment set aside as a standby reserve to secure payment of the certificates. Approximately $11 million were reimbursed to participating companies as of June 30, 1985.

These four very different state initiatives indicate the variety of possibilities available for higher education partnerships. Pennsylvania's Ben Franklin Partnership is important not only because of its size and high degree of leverage of state funds appropriated but because it resulted from a comprehensive strategic plan for economic development launched by Governor Thornburgh and draws heavily on the strengths of both public and private research universities in the state. Georgia's Industrial Extension Service has the potential of becoming the high tech equivalent of the Agricultural Extension Act of 1914 which disseminated the latest information and spread state-of-the-art technology from America's land-grant universities to farmers in agricultural extension stations across the states. The Bay State Skills Corporation in Massachusetts is the forerunner of state training programs designed for jobs in a knowledge-intensive economy. Iowa's Industrial Jobs Training program is an innovative way of using tax incentives combined with higher education resources to aid economic development.

The initiatives and studies discussed in this section of the paper build on existing economic and higher education strengths of the state. They do not attempt to create new technological infrastructures. Stung by the 1981-82 experience of the highest unemployment rate since World War II, the overriding consideration for the states is job creation. Higher education has become recognized as the key resource in our knowledge-intensive and technologically-oriented economy to further this objective.

In the case of the New England Board of Higher Education, it received its money from a federal agency for a regional project. No legislation was necessary, only the agreement to cooperate between NEBHE, the Caucus of New England State Legislatures, and the state legislatures themselves. The other initiatives occur at the state level only and require formal state authorization and investment. The features of these more formal partnerships are:

- The state acknowledges a fundamental problem of its economy.
- A strategy is designed to attack the problem. Legislation is passed, seed monies or matching funds are appropriated to support collaboration between business and industry and higher education.
- The state acts as a catalyst playing a secondary not a primary role.

The pitfall of the formal state initiatives is that they require a substantial and long-term investment. A steady commitment through good times and bad is essential--not only during the current economic recovery and expansion which has filled most state coffers beyond the fondest expectations of governors and legislative leaders. Though the early reports of these ventures sound promising, the marketplace will ultimately determine whether these state investments will bear fruit in the form of economic expansion and job creation beyond the costs involved.

AN INTERNATIONAL PERSPECTIVE

The industrialized countries of the world are likewise moving rapidly to overhaul their higher education systems, linking them more closely to economic and technical development. Overseas, in contrast to the American experience, it is the national governments which are setting the goals, choosing the institutions and programs to be favored, and re-allocating their budgets. In the United States those decisions have been pushed down to the state level. The Reagan Administration's deliberate relinquishing of initiative and decision-making to the states provides an unusual opportunity for the governors and legislators to exercise leadership and channel resources for higher education into areas vital to economic development. However, the extreme decentralization of authority over higher education in the United States creates problems and ambiguity of goals and priorities, duplication of efforts, and blurred focus in allocating resources.

It is well-known that the United States and Japan are far ahead of their competitors in their technological shares of the world market. Japan's plan for the 1980's has been established by its Ministry of International Trade and Industry (MITI). MITI planned a knowledge-intensive, high technology economy resting on the cornerstone of a high quality educational system. For Japan, technology has become the centerpiece of its competitiveness and achievement of economic security.

The West European countries, though proficient in basic research, lag well behind the U.S. in applied research and behind Japan in commercialization of new technologies. Individually they have begun the process of overhauling their national systems of higher education and economic development to make them more responsive to global market conditions.

France

Prime Minister Laurent Fabius is upgrading the quality of the French educational system to use it as a vehicle for modernizing the economy. The objectives he and Minister of National Education Jean-Pierre Chevenement are pursuing include:

- Making the university more relevant to the country's needs.
- Accepting the principles of economic competition in educational and national life.
- Training the maximum number of high-quality research workers in universities. France needs seven to ten thousand a year more engineering graduates beyond present output by 1990 and 14,000 a year more by the end of the century.
- Emphasizing teacher training to improve the quality of instruction and continuing education to encourage lifelong learning.

France is mobilizing university science departments and engineering schools throughout the country to connect their courses more directly to the skills needed in high technology industries such as computers and telecommunications. The Ministry of Education announced in June 1985 that it will allow universities for the first time to enter into direct partnerships with industrial corporations. Prime Minister Fabius says the new approach is part of a "necessary opening of the universities" to the outside world and a strengthening of links between the worlds of work and education.

To monitor higher education's effectiveness in this new movement, the French government has established a 15 member commission to prepare annual reports on the performance of the universities.

Great Britain

Prime Minister Margaret Thatcher's government produced a green paper for discussion last spring, similarly calling for a higher education system more closely linked to the needs of business and industry. The policy paper concludes that universities and colleges can contribute to Britain's economic development by encouraging more positive attitudes among their faculty and students about business and industry and by training qualified high technology workers. The need for technological manpower in the sciences and engineering requires continuing the trend away from the humanities and social sciences.

Overall, the European countries are following a similar pattern to the United States, but by a different route, redirecting enrollments and resources away from the humanities and social sciences to engineering and the natural sciences. Among other things, they are concerned about their present dependence on foreign countries for information technology and services. The nations of the European Economic Community presently import 40 percent of their technology needs. They seek to foster positive attitudes about business and industry at their universities, want business-university partnerships, and encourage much closer ties between higher education and national economic development than ever before.

Russia

Neither the Soviet Union nor China should be overlooked in this worldwide movement driven by global competitiveness for economic security. The Chronicle of Higher Education reported on July 25, 1985 that Prime Minister Mikhail Gorbachev sees higher education playing a key role in reinvigorating the Soviet economy by introducing high technology and by training a new generation of industrial managers competent in the use of computers. Two months earlier the Soviet Politburo had raised the pay of research scientists to accelerate the pace of technological innovation in industry. According to Pravda, the raise is aimed at increasing "incentives given to workers employed in industry and research facilities... to introduce new technology and raise the quality of work performed."

China

China, too, is undertaking major reforms of its research and development infrastructure to make it more market-oriented. Chairman Song Jian of the State Science and Technological Commission which oversees research institutes says, in the future "the bulk of the research institutes, especially those concerned with technological knowledge, will have a market orientation." The goal is to link science and technology research more closely to economic development and to reduce government support for research over the longer term by replacing it with business and industry contracts.

NEW DIRECTIONS

The single, most effective approach to strengthening state economic development is for states to invest in education. Education in fact is the largest budget expenditure of the states. Business and industry are far more impressed with the quality of education in a state than with the glossy presentations and promotional packages offered by economic development agencies. So if states want to leverage their public monies to produce the greatest return, it is best done by strategic appropriations to enhance educational excellence which encourages business to invest and expand, thereby contributing to greater job creation.

And it is in higher education where the states can act most effectively as catalysts, leveraging their investments in scientific and technological research and training as the seed money to develop matching grants and contracts from industry. For the fiscal year 1985-86, the states are spending nearly $31 billion for higher education, the largest single source of funding for America's colleges and universities, outside of tuition. In just the last two years, state spending for higher education nationwide is up by 19 percent, more than double the rate of inflation during the same period.

While the states' investment in higher education has risen sharply over what it was during the darker economic years of 1980 and 1981, states' expectations of what they will get in return are rising as well. Though there is good reason to believe higher education is doing a good or excellent job overall, one cannot be certain because reliable, timely information is hard to come by. There is a lot of information about colleges and universities but much of it is self-serving and insignificant as far as what legislators need to know. It is then up to legislators to ask the right questions to find out what they need to know to judge whether public monies are being well spent. In other words, do the results justify the investment or can the money be spent in more productive ways? This relationship between state investment and quality and productivity of higher education is described in a 1984 speech to the American Association for Higher Education by John T. Casteen, III, President of the University of Connecticut and former Secretary of Education of the Commonwealth of Virginia. He says:

> To command the necessary support for higher education in a changed economy and with new constituencies making new demands, the colleges must couple improvements in the quality of their courses and programs, including improvements in services to industry, and services to the schools with requests for increased support. Absent linkage of this kind, we will miss the opportunity to move beyond pleas for help with damage control and toward command of both a greater share of available revenues and greater presence in state policy generally. The state should make clear its goals and priorities for higher education. Legislators can then weigh results produced against objectives sought. That is where the standards come for purposes of evaluation. The goals of course must be realistically stated and must be measurable. These are not philosophical questions. The state has finite economic resources to allocate and must award them in light of the

> benefits to be accomplished, the cost of the investment, and the competing opportunities for use of the money. These considerations are not moral absolute as some academics think but policy judgments weighing competing interests.

Higher education has become America's most critical economic resource. As a national resource, America's colleges and universities are unrivaled by any country in the world in terms of size, investment, and productivity. America's elementary and secondary public school system, however, is not superior compared to foreign school systems--it never has been. The real purpose of the reform movement is to make U.S. schools competitive with foreign schools, especially in mathematics and science. After nearly two decades of deterioration and decline, the nation is making an all-out effort to restore elementary and secondary education to its early 1960's level of quality. Though public confidence has risen in the past two years and SAT's are improving, pre-1965 standards are unlikely to be achieved before the end of the 1980's at the earliest.

Governors and legislative leaders commonly accept the importance of the linkage now between education and economic development as the road to competitiveness and jobs. Improving the quality of education remains a top priority for policy-makers in the states.

They need not, however, try to repeat for colleges and universities the unexpected success enjoyed by the public school reform movement in the short period since the publication of A Nation at Risk in March 1983. Economic conditions differ as well as the level of public awareness of the working of these more complex institutions of higher education. The public had become more critical of its primary and secondary schools than its colleges and universities. There was a greater sense of urgency about the public school system where 40 million students get educated each year - more than three times the enrollment of higher education. Actually, as early as 1979, public opinion polls turned the corner and began to rise in favor of higher education though not for the public schools. Public confidence in our colleges and universities has been rising ever since and is now at the highest point it's been in over two decades.

At the same time, it should be remembered that higher education more directly affects economic development and technological progress than the secondary schools. Public high schools send half of their graduates directly into the workforce, the other half enter college. It is in our colleges and universities, however, where the nation's young learn to think independently and critically about advanced subjects vital to a knowledge economy. That is where the fine minds are honed that produce the technological achievements in the sciences and engineering.

Governors and legislators act gingerly in dealing with colleges and universities. There are still lingering effects from the McCarthy era. They don't want to be accused of denying academic freedom or politically interfering in the internal academic affairs of institutions of higher learning. Nor are they secure about academics who defend their territories by claiming that issues such as curriculum, teaching, and research are too complex and specialized for untrained outsiders to grasp. As is so often the case in such matters, these are not either/or issues but rather a question of the right amount of interest shown consistent with responsibility for the use of public dollars. Senator Florence Robillard, Chairperson of the Senate Education Committee for the Vermont General Assembly, says, "my second priority for our educational institutions is that their actions must be accountable; my first, that they be accessible and my third, that they be acceptable to the marketplace." The question for elected officeholders is not whether they are spending the most money on higher education, but whether they are getting the most out of the higher education investment.

Rarely have major reforms or initiatives come from within higher education. They come from outside the walls of the academy because of social movements as in the 1960s or because of federal legislation as in the case of the Morrill Act of 1862 or the Higher Education Act of 1965. In an August 20, 1985 meeting of the New England Legislative Advisory Council, Massachusetts Representative and House Chairman of the Joint Committee on Education Nicholas Paleologos said, "The hard questions are not even being asked about higher education." Not a single legislator in the room dissented from this view.

To ask the hard questions, one must know the right questions to ask. Governors and legislators should both broaden their sources of information and require better information from higher education if they are to judge how well public monies are being used.

STRATEGIC PLANNING

The first question to ask of higher education is "where are you now," to be followed by "where are you going?" Every state system and every college should be prepared to answer those questions in concrete terms.

One limitation of college and university data presented to public officials is that the data are self-serving, much like those of any other institution or interest group dependent on government appropriations for its budget. Another is that college and university data are offered in support of sweeping mission statements too generally worded and too bland to be of much value to policymakers in evaluating achievement of objectives. What is lacking are strategic plans for institutions of higher education seeking public funds.

University plans should be linked closely with state economic development plans which set goals and priorities for their economies and should define the special role to be played by higher education with regard to the number and kinds of trained graduates to be produced and the varieties of research to be supported.

Such strategic plans are no attempt to dictate policy. Rather, they are practical arrangements to move away from cosmic generalities toward realistic assessments of strengths, weaknesses, priorities, and contributions to achieving state goals. The New England Board of Higher Education, through a broad-based special commission, established such a plan that won a broad consensus in the six New England states. The plan provides a comprehensive long-term perspective to the issues and specific recommendations for higher education's role in economic development. Pennsylvania, under the leadership of Governor Thornburgh, also prepared a strategic plan essential to the state's economic health. The two-and-a-half year effort enabled Pennsylvania to recognize the true value of its great research universities and overall higher education infrastructure, and to begin shifting from a traditional industrial base to advanced technology enterprises.

NEW EXPECTATIONS FOR HIGHER EDUCATION

A 1984 study of the attitudes of New England's legislators about higher education showed that one of their greatest concerns is getting better information. The independent New York-based Committee on Economic Development in a recent report also said, "Private industry could not succeed with a data-collection system and research base as weak as this nation has in the field of education." One can only wonder why education is so remiss in providing adequate data about itself when information is so readily available in other fields such as stocks and bonds, professional sports, and the economy. Perhaps this is because independently financed organizations, both public and private, collect the data in these other fields. Many different types of indicators can be developed by independent agencies but the cooperation of individual colleges and universities is critical because they are the source of the information.

Four approaches to improving the quality of information are offered as a start.

1. Annual Report of Performance

   Each state should use an outside group composed of prominent non-technical citizens, mainly business executives, whose companies are the greatest employer of college graduates, to judge how well higher education is meeting state goals. Scoreboards touting higher education achievements without disinterested, independent evaluation of performance serve only a public relations function, not a measurement purpose. Moreover, it should be remembered that state governing boards which provide information are not disinterested third parties which can be expected to report impartially on the system they govern.

   Colleges and universities provide information that is roughly equivalent to the approach of an annual report--it states their case. Look to independent third parties, public and private, for analysis, interpretations, and perspective. For example, France in May 1985 announced a new 15 member commission to produce annual reports on the performance of the nation's universities. Similar plans are being made to appoint an outside commission to report on major research programs.

2. Better Communication with Legislators

   Colleges and universities should be more candid, structured, and systematic in dealing with state legislators. Particularly in view of the high turnover of legislators, it is important to hold meetings with legislators periodically and not only at budget time, to discuss mutual resources, problems, and priorities. Over-reliance on centralized state boards of higher education for communication and information may actually impede more direct, informal communication between university educators and local legislators.

   In a May 1985 meeting of the Governor's Visiting Committee to the University of Maine with state legislative leaders, one of the concerns expressed by the legislators was legislative fuzziness about university governance. It was pointed out that legislators tend to let the University govern itself because they don't understand the chain of command. They think the university needs a tremendously increased presence before the legislature.

3. Informed Public Debate

   Both governors and legislators must raise the level of public awareness of the issues and priorities in linking higher education closely to economic development. In some states the issues are remote to the public; they remain the province of a select leadership who determine the future. In Massachusetts, for example, despite the remarkable success of Route 128 in sparking the economic renaissance of a decaying industrial state, Governor Michael Dukakis and the powerful Massachusetts High Technology Council still have sharply contrasting views of the economic world they live in and their visions of the future.

Dan Dimancescu, a technology consultant in Cambridge, wrote a "Dear Governor" column for the Boston Globe in June 1985 taking Governor Dukakis to task for "riding the crest of a high-tech boom without returning new seed for the next growth cycle." Dimancescu criticized the Governor's policies and inaction on higher education and new technology as evidence of a passive approach to building stronger economic foundations for the state. The issue was joined when John Hoy of the New England Board of Higher Education replied in a "Dear Dan" column later that month, strongly defending Governor Dukakis and describing his accomplishments in higher education. Hoy argued Dukakis not only raised Massachusetts from the bottom of the barrel in state financing to one of the largest percentage increases in appropriations for education during the last three years, but also that he acknowledged the impact of the broad educational base of Massachusetts' economic turn-around -- not simply in high-tech fields.

Regardless of who had the better arguments, the fact that these issues were singled out and debated raised the level of public understanding and produced a continuing dialogue. There is far too little of this going on in the states today, with the result that there is often a rush on to do something about higher education and economic development but too little time spent in building and maintaining public consensus.

4. Two Rarely Used Indicators

Of particular interest to the states but seldom provided to legislators are the states' comparative rankings for contracts and grants received per faculty member and research expenditures per faculty member. These have a direct bearing on the state's capability in research and development for technology innovation and the productivity of faculty.

For example, a small state like Vermont appropriates the smallest amount of dollars per student to public higher education, but it ranks 13th among all states in research expenditures per faculty member, fifth in instruction expenditures per student, and as high as fifth in contracts and grants per faculty member. No wonder higher education makes such a large contribution to the economy of the state of Vermont. On the other hand, it is not surprising that private universities and colleges in Massachusetts rank third nationally in research expenditures per faculty member and fifth in contract and grant monies awarded. But public institutions finish a dismal 50th for both these rankings. Whether this public-private imbalance in Massachusetts is a matter of conscious policy or the result of lack of information for policy-makers is unclear.

The proposals discussed in this section of the paper are meant to be suggestive. Many other indicators and improvements for better information can be devised by those concerned with higher education. The purpose is not to encourage new regulations for higher education but to assist state policy-makers in evaluating the long-term value of the public investment. Incentives such as tax benefits and special grants to encourage desired behavior would certainly help accomplish this objective.

Hard evidence to measure the health of higher education is grossly inadequate. If one wants to find out about the health of a publicly traded company, a wide array of financial reports are available from reliable, independent investment services such as Standard and Poor's, Moody's, and Value Line. To find out how a favorite major league baseball team is doing, simply open up the sports page to reams of statistics about the performance of the team, each one of its players, and its opponents as well. Why is it then so exasperatingly difficult to get timely, relevant data comparable over time indicating the yield of public funds invested in higher education? After all, colleges and universities are the most significant national depositories and transmitters of knowledge and information in our society--except perhaps about themselves. This may be an idea whose time has come.

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